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THE
GEOLOGY AND PALÆONTOLOGY
OF
QUEENSLAND
AND
NEW GUINEA.

W.E. Scheerll
Nov-12, 1932
Brisbane

BY
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PLATES AND MAP.

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Unless otherwise stated, the Figured Specimens are in the Geological Survey of Queensland Collection.

Other Collections are indicated by letters within brackets [-], as follows:—

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Australian Museum	...	...	...	...	„	[A.M.]
Queensland Museum	...	...	...	...	„	[Q.M.]
Mining and Geological Museum, Sydney	...	...	...	...	„	[M.G.M.]
Mr. C. W. De Vis	...	...	...	...	„	[De V.]
The late Revd. W. B. Clarke	...	...	...	...	„	[W.B.C.]*
The late Mr. R. Daintree	...	...	...	...	„	[R.D.]†
Philosophical Society of Bath, England	...	...	...	...	„	[P.S.B.]
The late Revd. J. E. Tenison Woods	...	...	...	...	„	[J.E.T.W.]‡
Prof. H. A. Nicholson	...	...	...	...	„	[H.A.N.]
Prof. A. Liversidge, &c.	...	...	...	...	„	[A.L.]§

* Since burnt in the Garden Palace fire, Sydney.

† Now partly in the British Museum, partly in the Queensland Museum, and partly lost sight of.
 Now partly in the Macleay Museum, and partly in the Technological Museum, Sydney.
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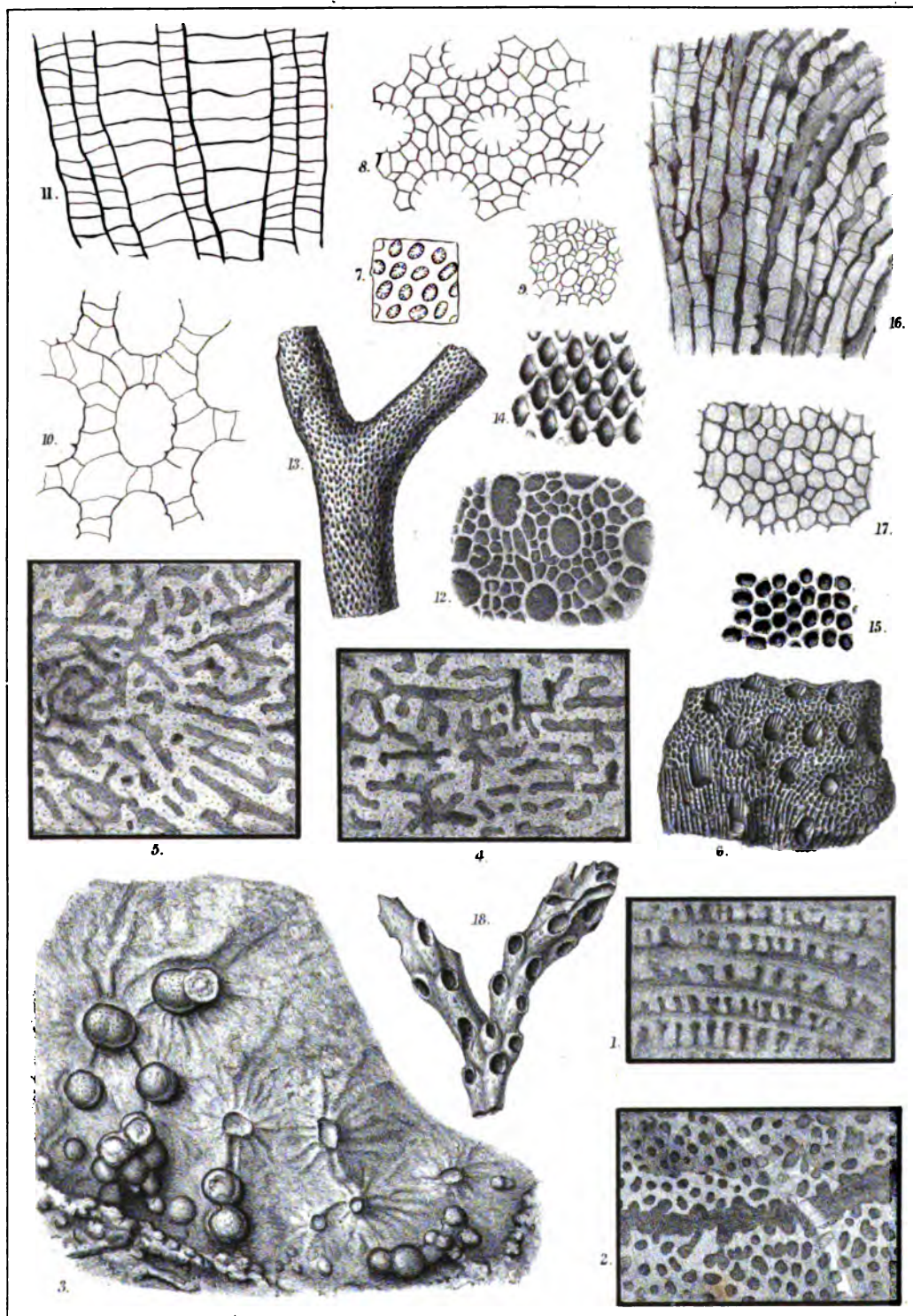
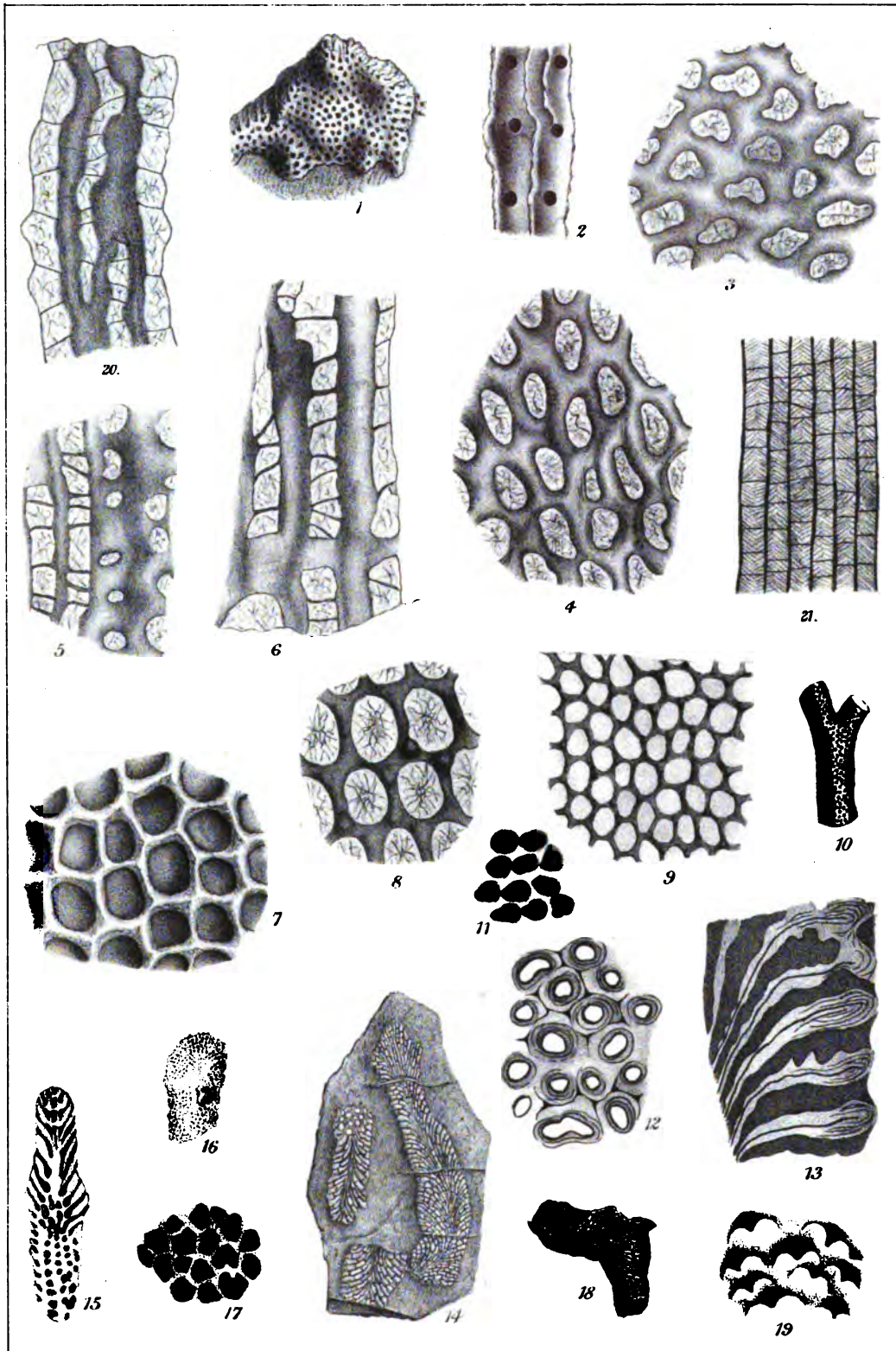


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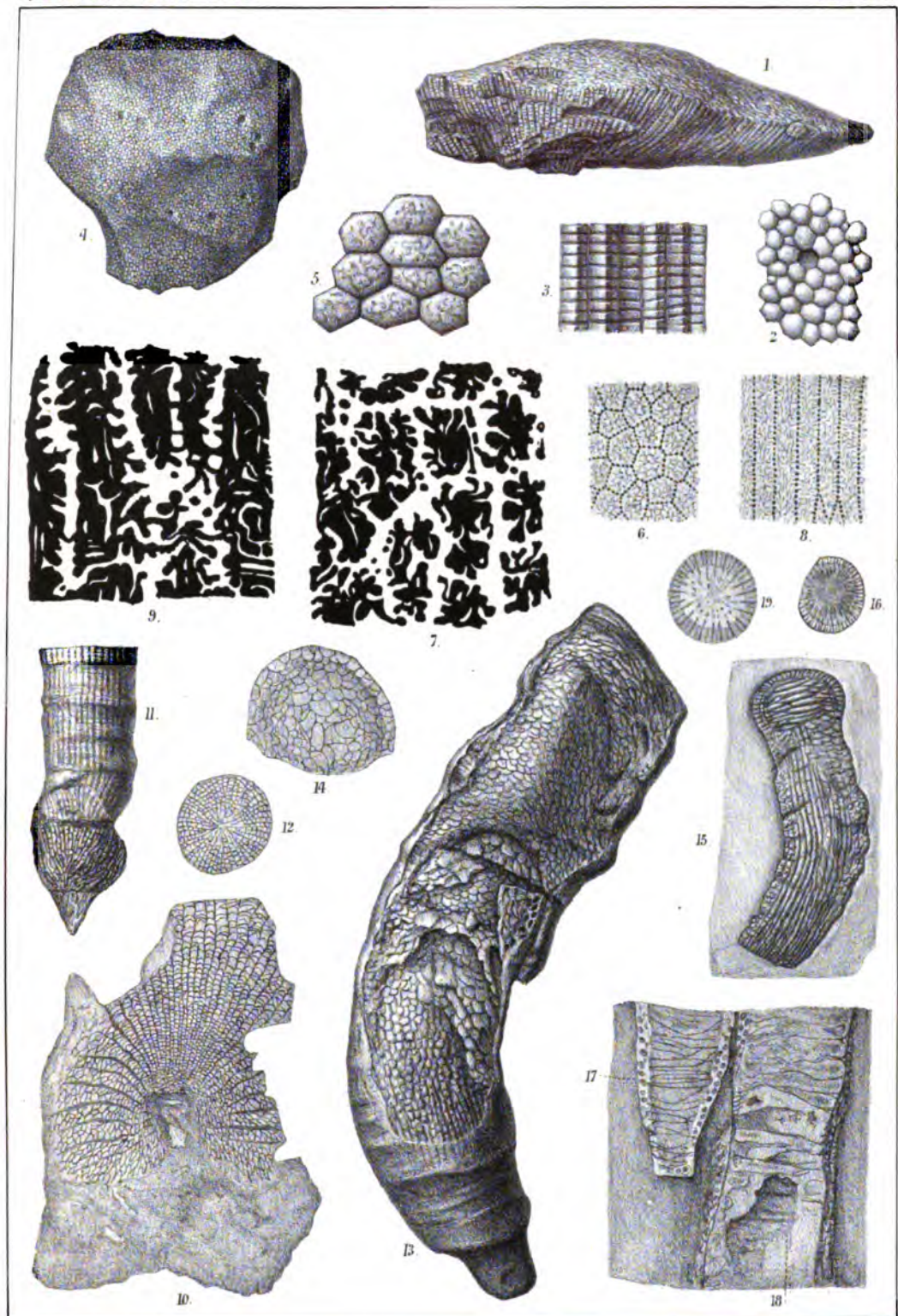
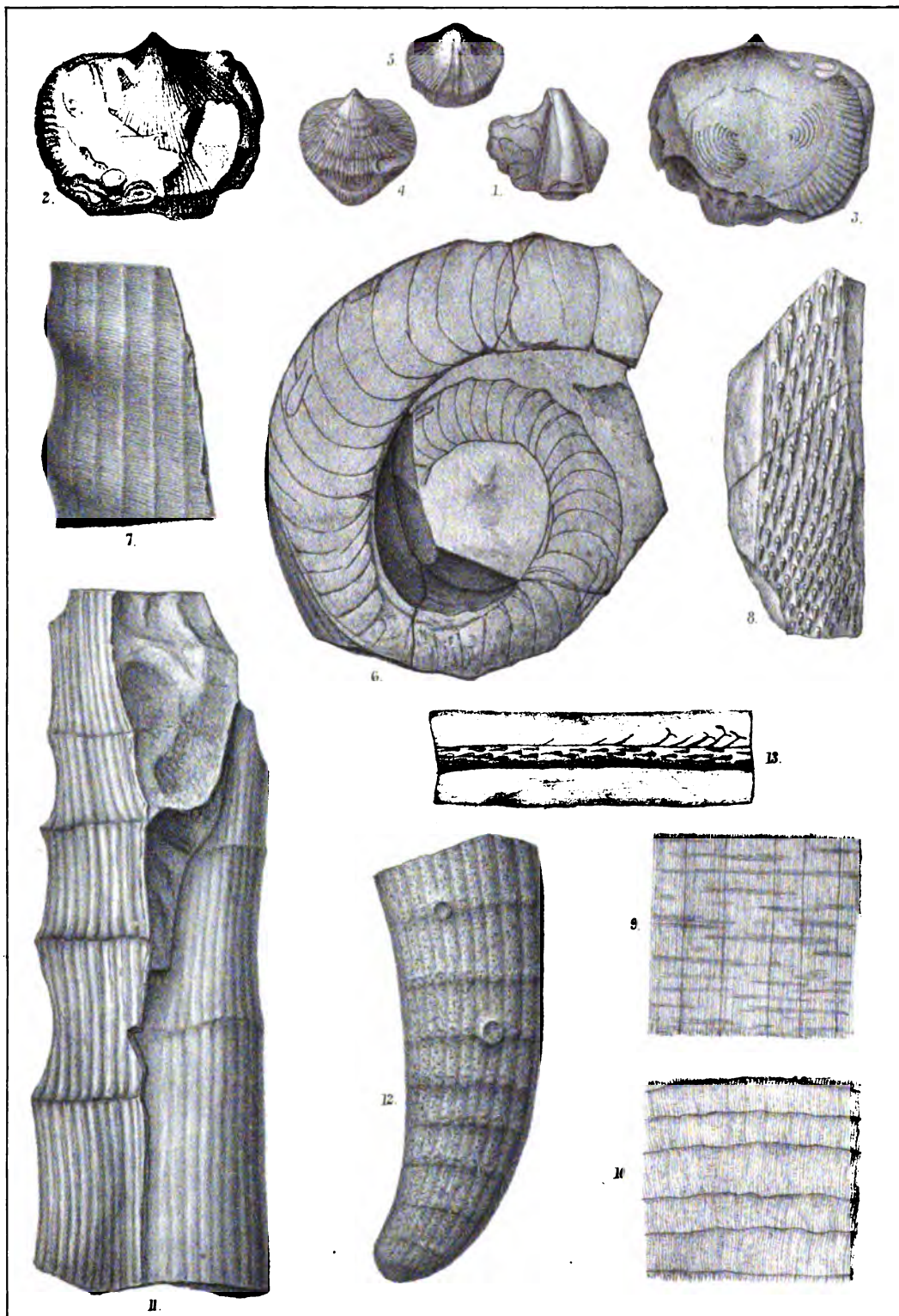




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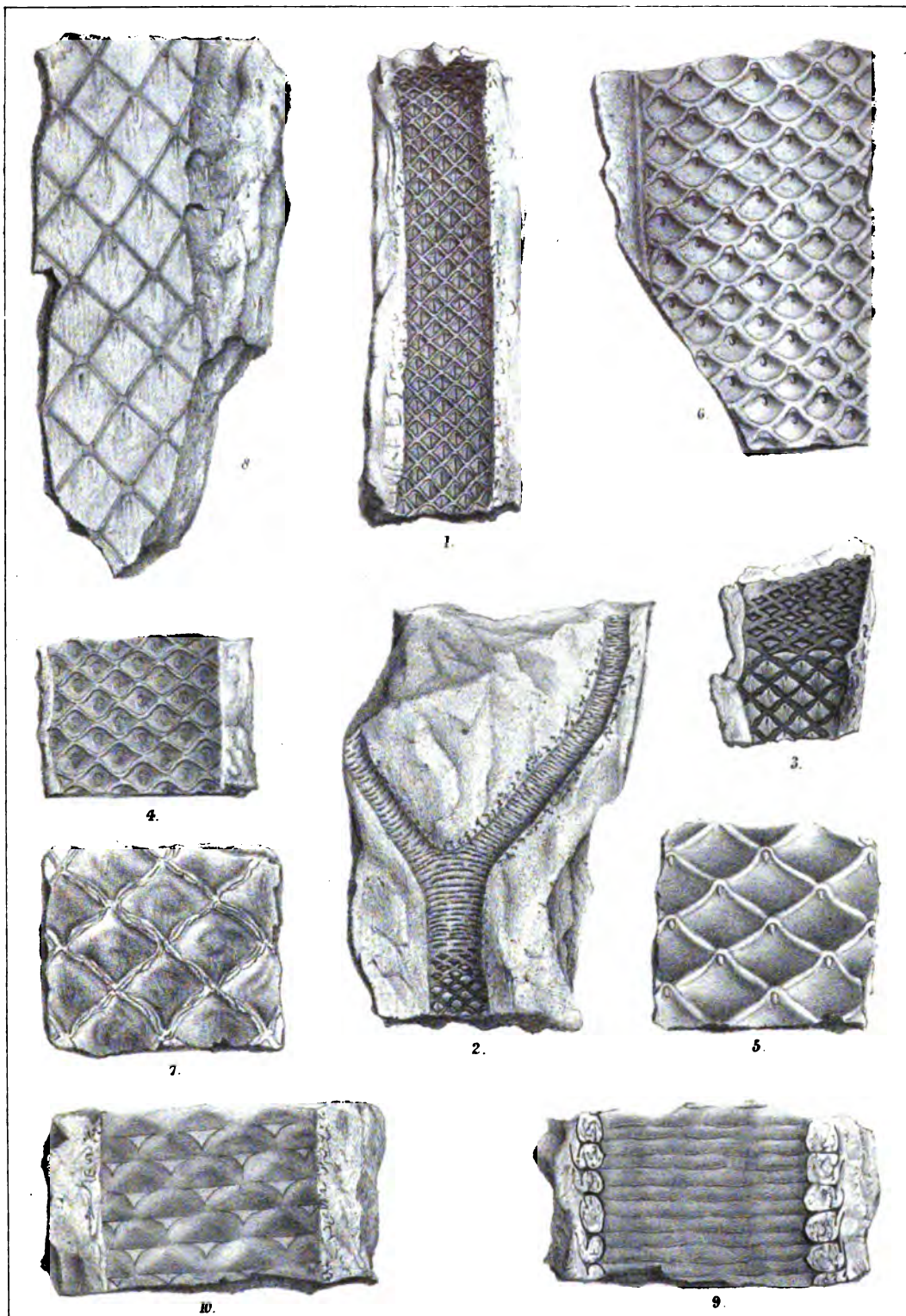
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PLATE 5.

Lepidodendron australe, McCoy.

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[Figs. 1-5, 7, 9, and 10 are copied from the figures of Mr. Carruthers. He does not, in his Paper, distinguish between the localities of the specimens; they may, therefore, come either from Mount Wyatt or Canoona. The repository of these specimens, also, is unknown to me, unless they be in the Botanical Department of the British Museum.]



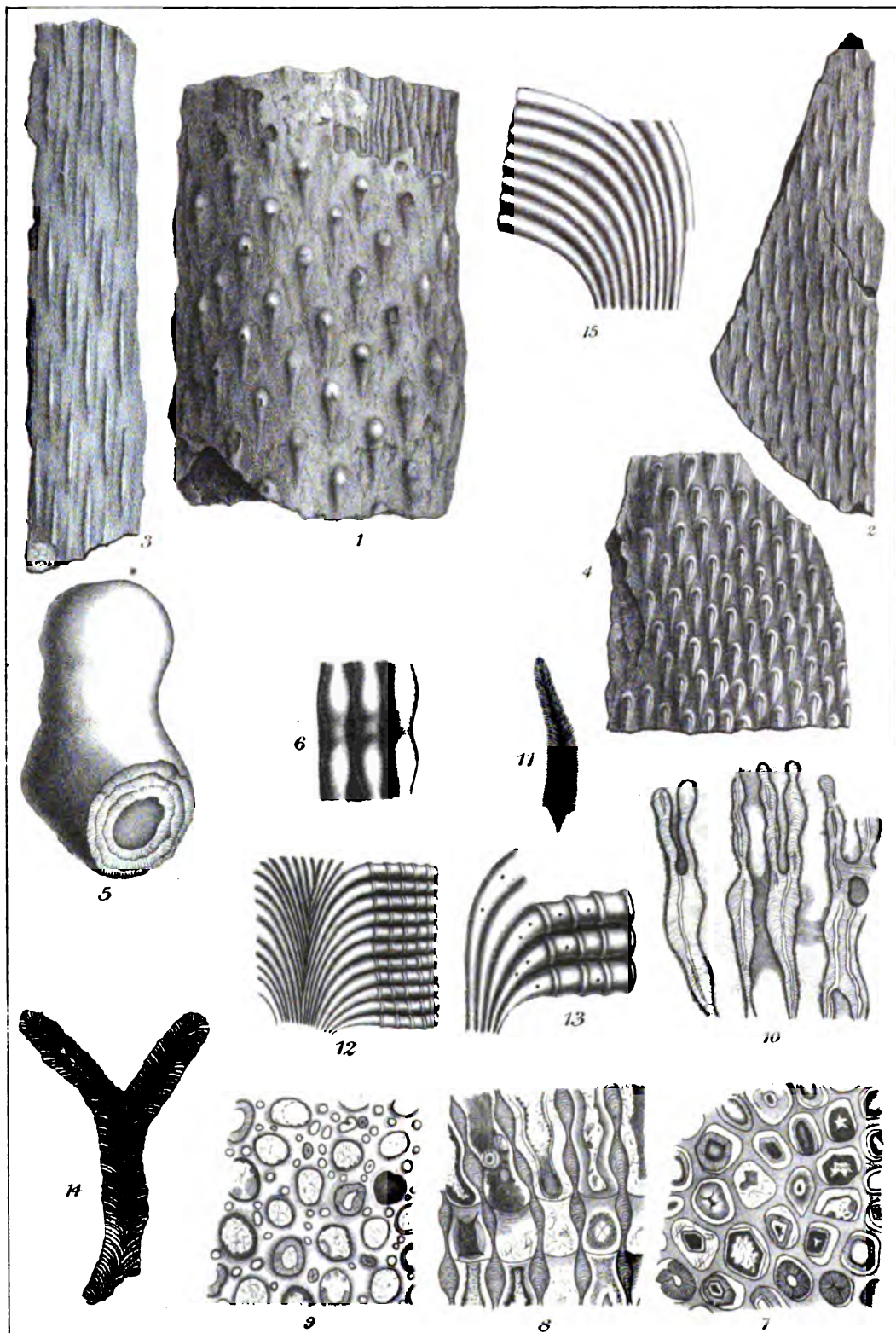
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LOWER CARBONIFEROUS PLANTS.

PLATE 6.

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LOWER CARBONIFEROUS PLANTS &
CARBONIFEROUS CORALS.

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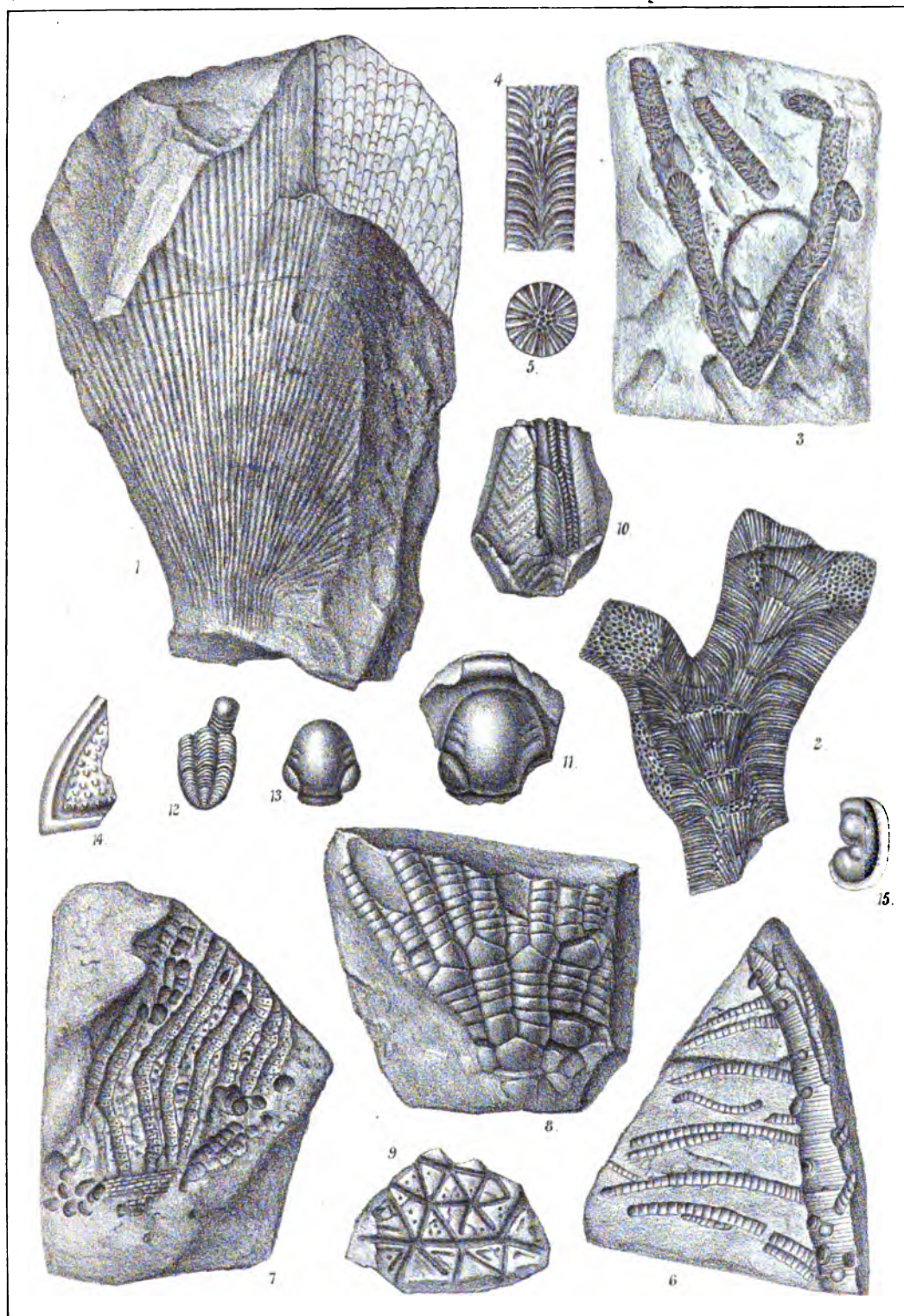
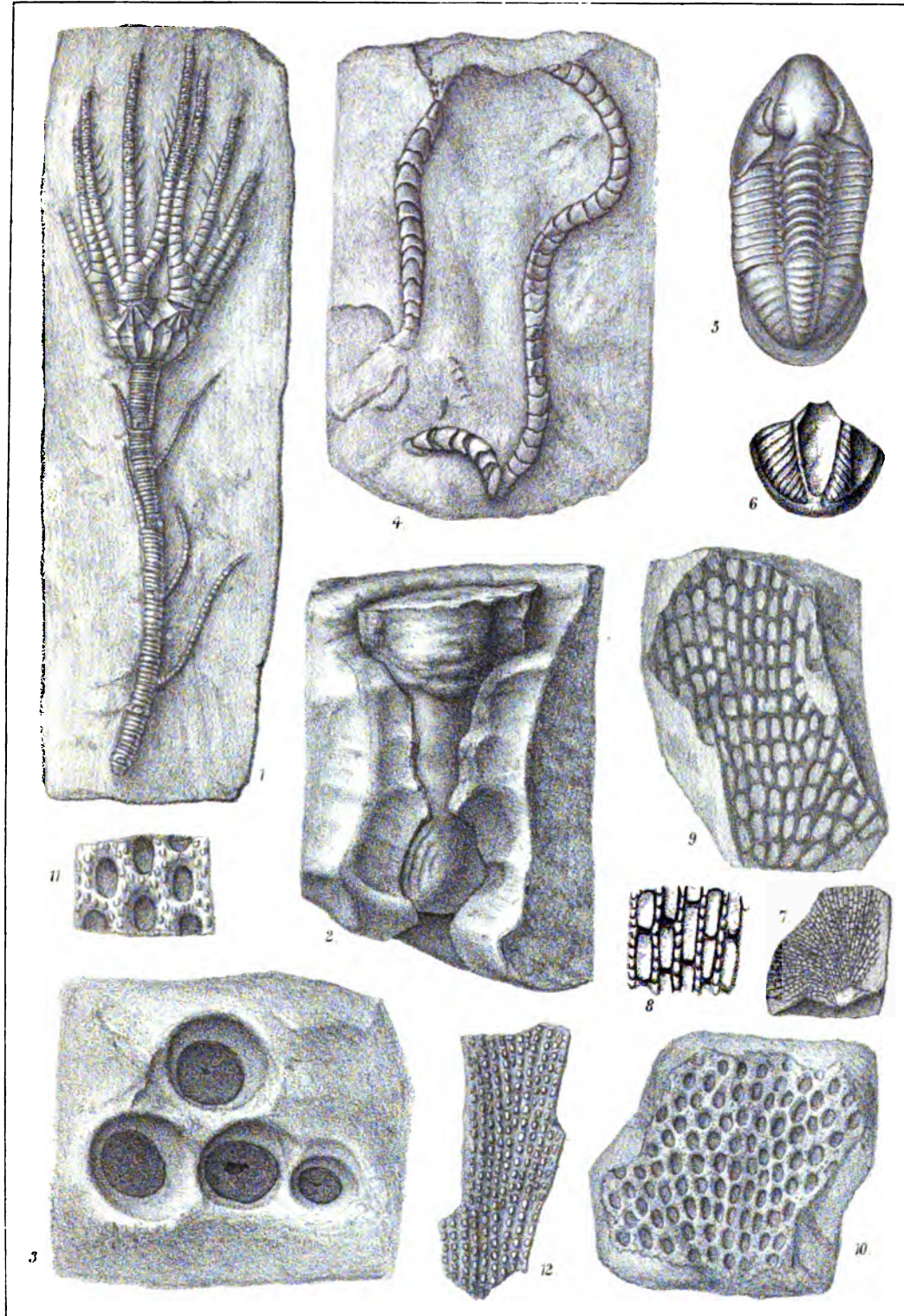


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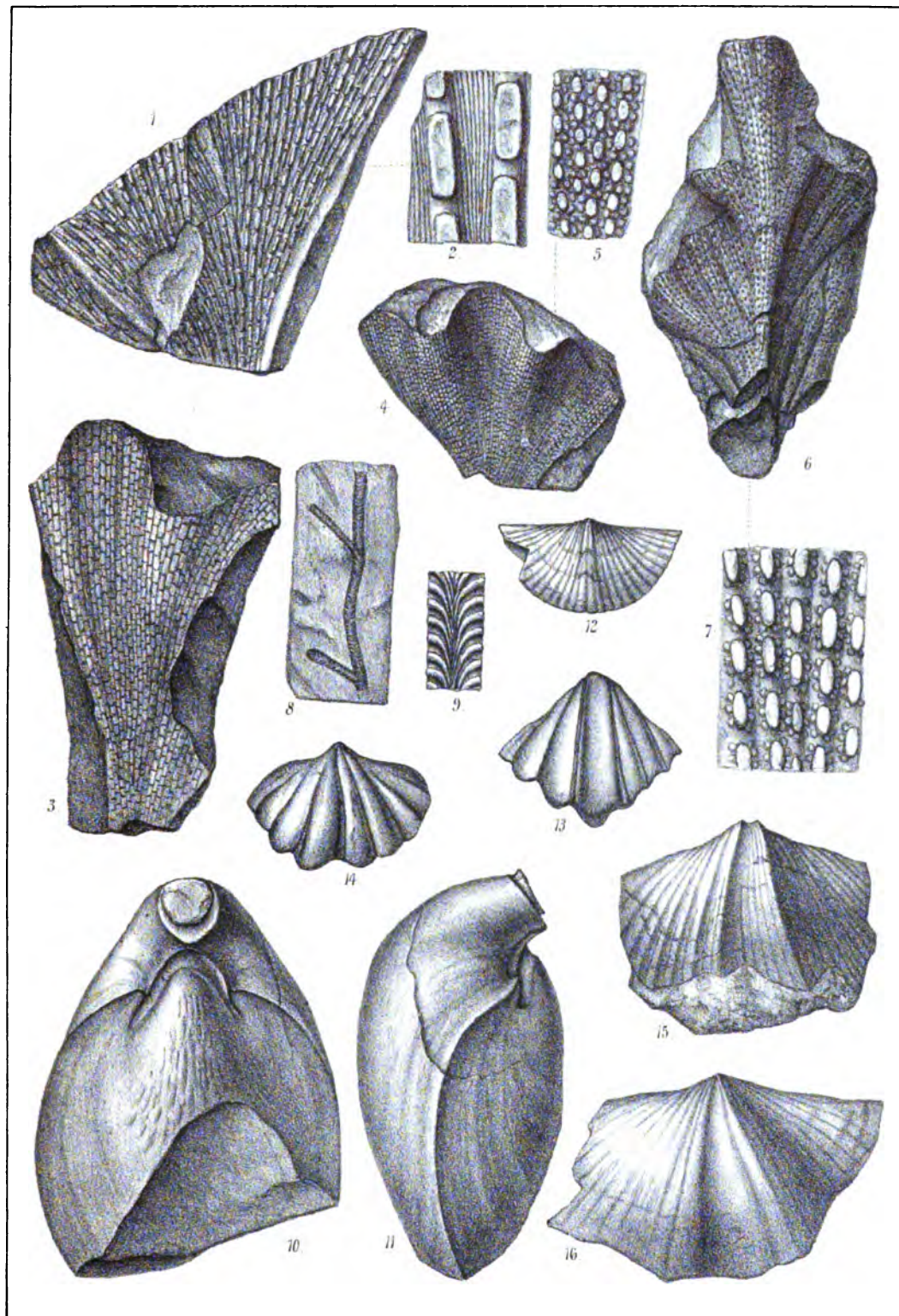
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CARBONIFEROUS ANNELIDA, ECHINODERMATA, CRUSTACEA & POLYZOA.

PLATE 9.

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- Fig. 11. Do. Side view of the same specimen.
- Fig. 12. *Spirifera*, allied to *S. striata*, Sby. Dorsal valve of a small individual (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 18, f. 8). Don River. [R.D.]
- Fig. 13. *Spirifera Darwinii*, Morris. Ventral valve of a young specimen. Bowen River.
- Fig. 14. Do. Dorsal valve.
- Fig. 15. *Spirifera trigonalis*, var. *bisulcata*, Sby. Ventral valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 17, f. 4). Bowen River. [R.D.]
- Fig. 16. Do. A large individual (*S. striata*, Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 17, f. 5. Bowen River.) [R.D.]

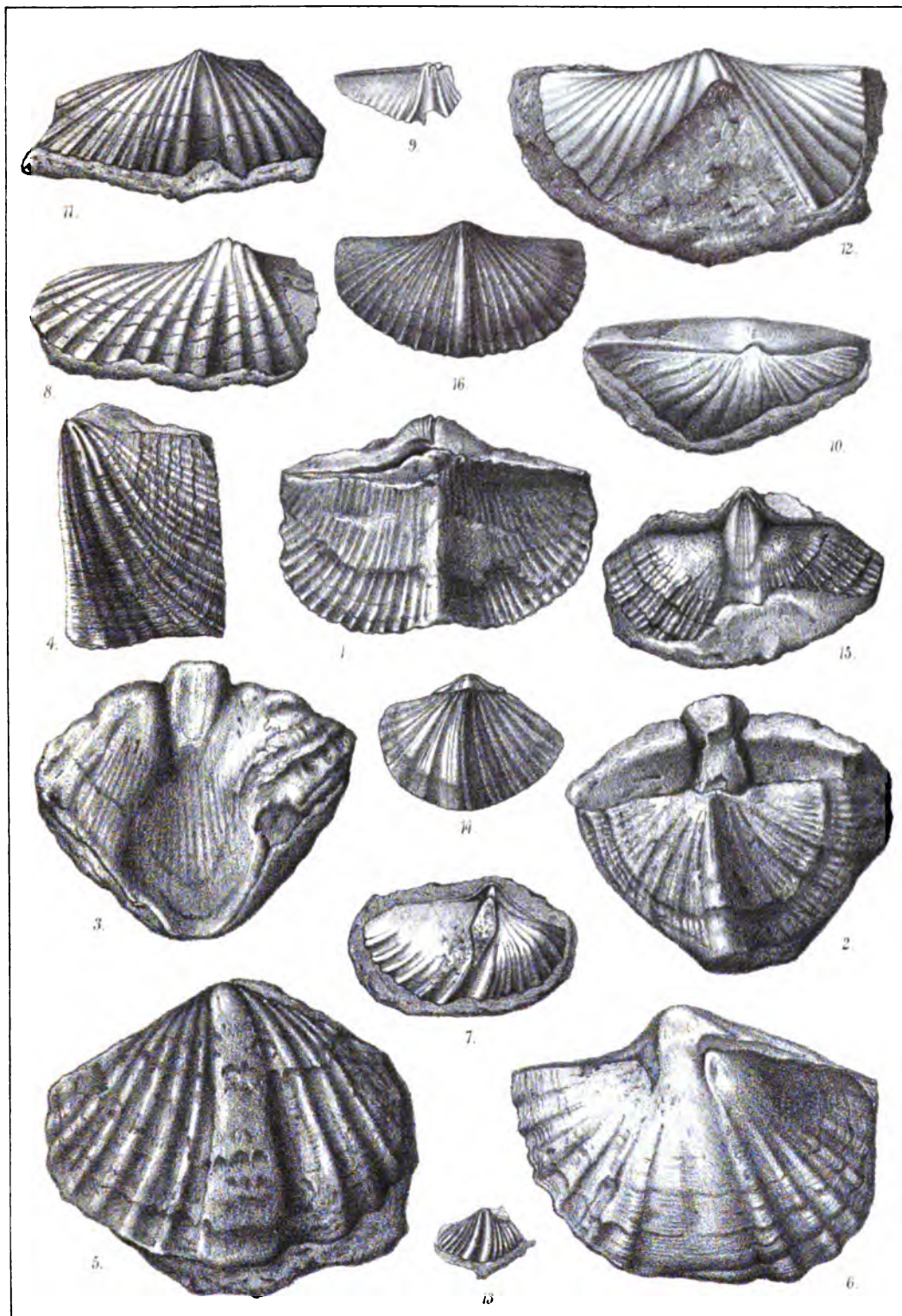


Berjeau & Highley del. et lith.

Mintern Bros. imp.

PLATE 10.

- Fig. 1. *Spirifera tasmaniensis*, Morris? A decorticated specimen seen from the dorsal side, with the costæ much broken up. Bowen River Coal Field.
- Fig. 2. *Spirifera Stokesii*, König. Internal cast of the dorsal valve, area, ventral umbo, &c. Mount Britton Gold Field.
- Fig. 3. Do. The same specimen, seen from the ventral side.
- Fig. 4. Do. Cast from an impression of a fragmentary specimen, showing the grouping of the radiating costæ. Gympie.
- Fig. 5. *Spirifera Strzeleckii*, De Koninck. Cast of the exterior of a large dorsal valve, with simple widely separated costæ. Gympie.
- Fig. 6. Do. Cast of the interior of the ventral valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 16, f. 3). Gympie. [R.D.]
- Fig. 7. Do. (?) Cast of the interior of the ventral valve of a small example, slightly decorticated (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 15, f. 4). Gympie. [R.D.]
- Fig. 8. *Spirifera vespertilio*, G. B. Sowerby. Cast of a dorsal (?) valve with a subdivided fold (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 16, f. 2). Gympie. [R.D.]
- Fig. 9. *Spirifera bicarinata*, Eth. fil. Cast of a ventral valve, with the deep sinus and much extended hinge-line. Port Curtis.
- Fig. 10. *Spirifera convoluta*, Phillips? Cast of an indistinctly preserved ventral valve. Bowen River Coal Field.
- Fig. 11. Do. Cast of the ventral valve of another example (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 17, f. 3). Bowen River. [R.D.]
- Fig. 12. *Spirifera trigonalis*, Martin, var. *acuta*, Etheridge. Decorticated dorsal valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 16, f. 1). Gympie. [R.D.]
- Fig. 13. *Spirifera bicarinata*, Eth. fil. Cast of a small ventral valve with a deep sinus. Stanwell.
- Fig. 14. *Spirifera dubia*, Etheridge. Dorsal valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 16, f. 6). Gympie. [R.D.]
- Fig. 15. *Spirifera*, sp. ind. Cast of a ventral valve, with costæ partially united in bundles.
- Fig. 16. *Spirifera* (? *S. Clarkei*, De Kon.). Dorsal valve, with a sharp narrow fold, and equidistant simple costæ. Bowen River Coal Field.



Bergeau & Highley del. et lith.

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CARBONIFEROUS BRACHIOFODA

PLATE 11.

- Fig. 1. *Spirifera bicarinata*, Eth. fil. Ventral valve. Great Star River Series.
- Fig. 2. Do. Another specimen. Port Curtis District.
- Fig. 3. Do. Portion of a ventral cast of a variety. Port Curtis District.
- Fig. 4. *Spirifera duodecimcostata*, McCoy. Ventral valve. Cania.
- Fig. 5. *Spirifera*, sp. ind. Impression of part of a large ventral valve, with numerous interpolated ribs. Stanwell.
- Fig. 6. *Martinia? productoides*, Eth. fil. Ventral valve, possessing incipient radiating ribs in the middle line. Cania.
- Fig. 7. Do. Another specimen, with a smooth surface.
- Fig. 8. Do. Dorsal(?) valve of young form, with area and fissure.
- Fig. 9. Do. Another similar specimen.
- Fig. 10. Do. Exterior of a young individual, but with a sulcus instead of a fold.
- Fig. 11. Do. Ventral valve of another example, with area, fissure, and internal radiating ribs.
- Fig. 12. *Martiniopsis? subradiata*, var. *Morrisii*, Eth. fil. Ventral valve of an abnormal variety. Cania.
- Fig. 13. Do. Side view of the same specimen.
- Fig. 14. *Martiniopsis? subradiata*, G. Sby., sp. Internal cast of the ventral valve. Stanwell.
- Fig. 15. *Athyris Roysii*, Léveillé. Portion of an impression showing concentric imbrications, and the marginal radiating spines. (This is a very indifferent figure.) Stanwell.
- Fig. 16. *Athyris Randsi*, Eth. fil. Dorsal view, showing the high fold. $\times 1\frac{1}{2}$. Port Curtis.
- Fig. 17. Do. Side view of the united valves. $\times 1\frac{1}{2}$.
- Fig. 18. Do. Front view of the same. $\times 1\frac{1}{2}$.
- Fig. 19. *Athyris ambigua*, Sby. A much crushed example, which is in consequence made to look too angular. (A bad figure.) Port Curtis.
- Fig. 20. *Rhynchonella lilymerensis*, Eth. fil. Dorsal view. Lilymere.
- Fig. 21. Do. Ventral view of the same specimen.
- Fig. 22. Do. Side view of the united valves.
- Fig. 23. *Rhynchonella pleurodon*, Phillips? Dorsal view. $\times 2$. Cania.
- Fig. 24. *Retzia radialis*, Phillips. Crushed example of the ventral(?) valve. Great Star River Series.
- Fig. 25. Do. Portion of the surface, enlarged to show the casts of the shell perforations.
- Fig. 26. *Orthis resupinata*, Martin. Decorticated ventral valve. Stanwell.
- Fig. 27. *Orthis australis*, McCoy? Internal cast of the ventral valve, with the muscular impression casts well marked. Great Star River Series.
- Fig. 28. *Orthis resupinata*, Martin. A small internal cast of the ventral valve referable to this species. Great Star River Series.
- Fig. 29. *Orthis australis*, McCoy? A small example of the dorsal(?) valve. Stanwell.

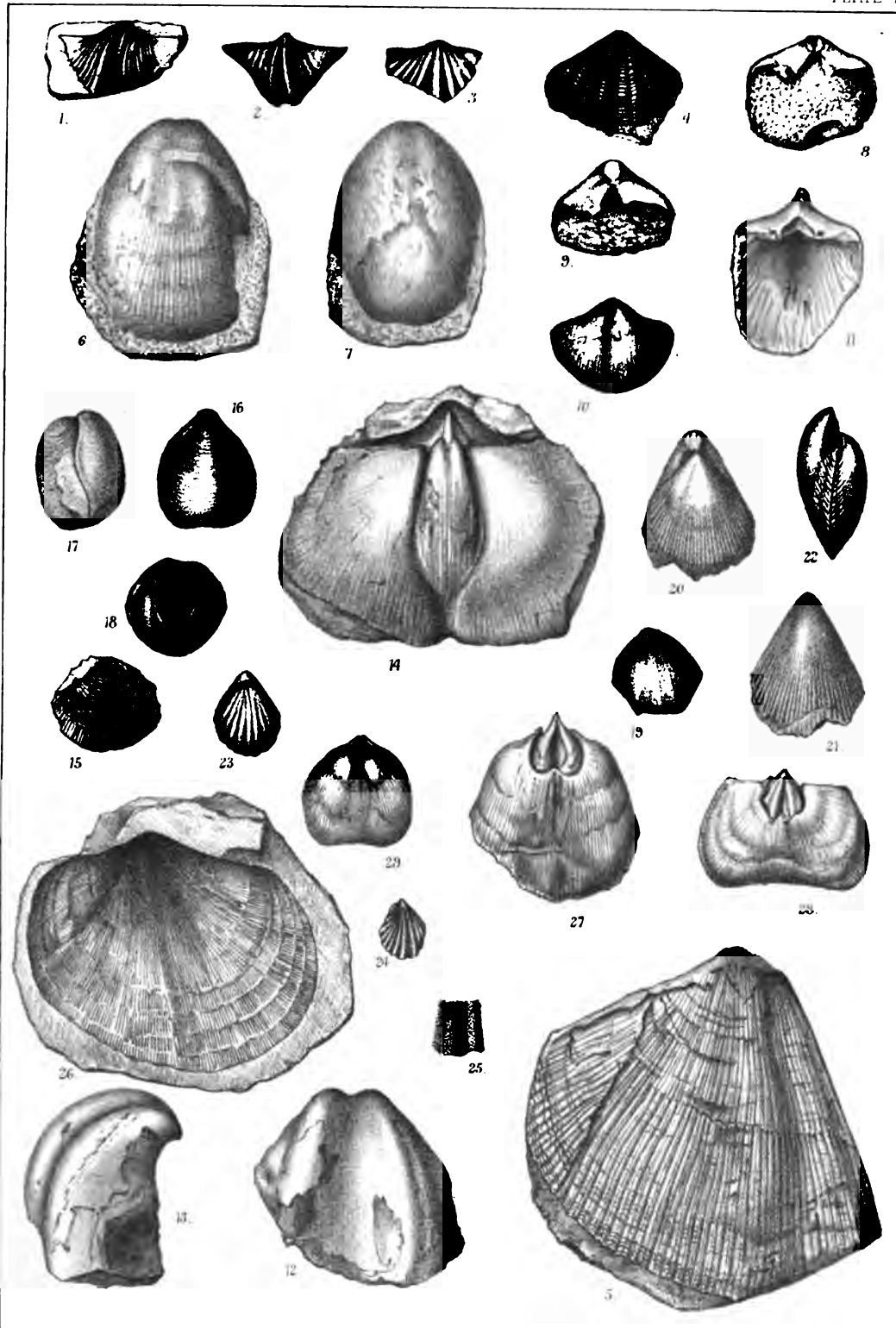
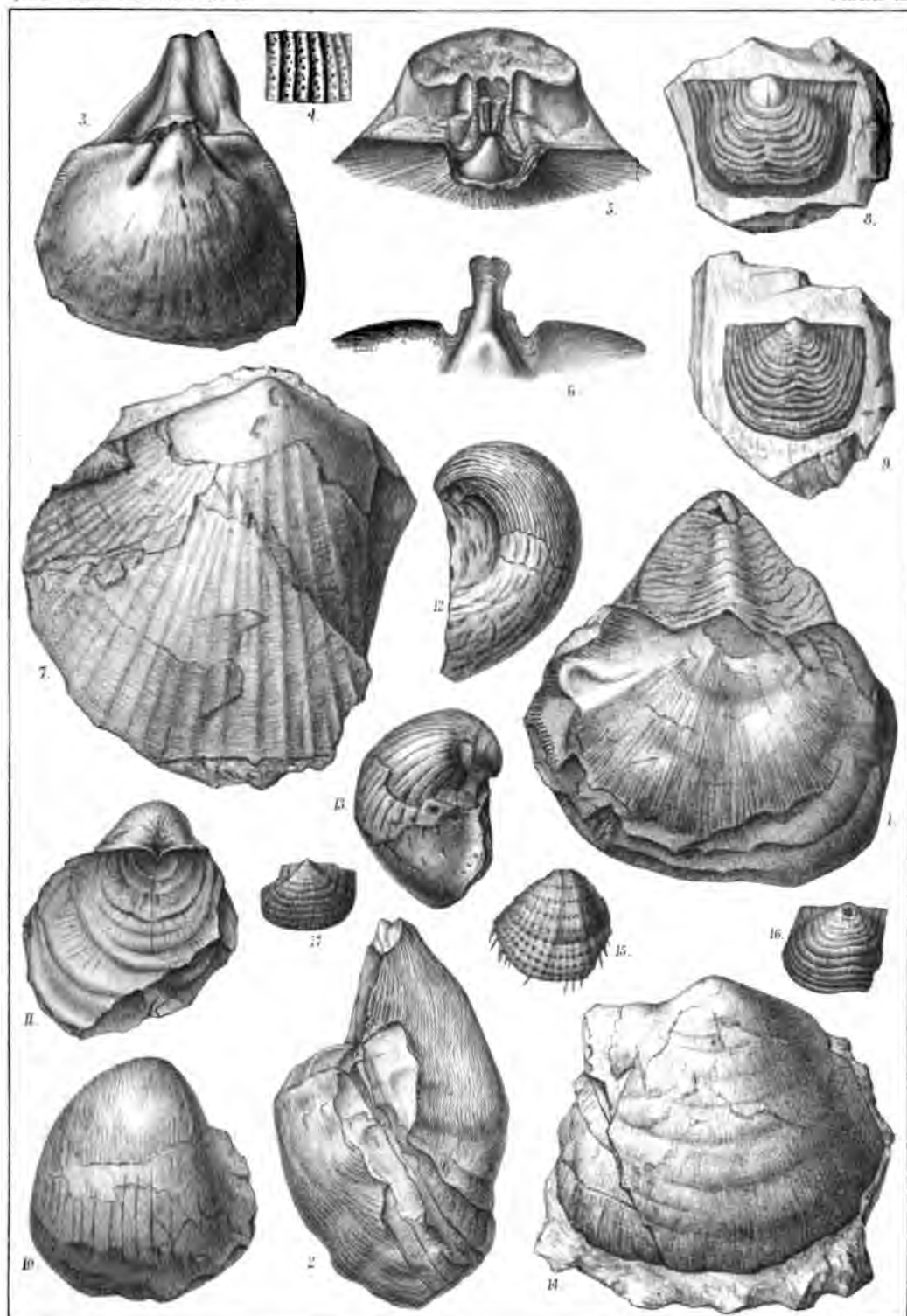


PLATE 12.

- Fig. 1. *Derbyia senilis*, Phillips, sp. Dorsal view. Bowen River Coal Field.
- Fig. 2. Do. Side view of the same specimen.
- Fig. 3. Do. Internal cast of a smaller example, showing the cavities left by the massive shelly plates diverging from the cardinal process. Bowen River Coal Field.
- Fig. 4. Do. Fragment of the surface, highly enlarged to show the punctation of the test. $\times 5$.
- Fig. 5. Do. Portion of the area removed, exposing the bifid cardinal process of the dorsal valve. Bowen River Coal Field.
- Fig. 6. Do. An undivided cardinal process.
- Fig. 7. *Maccoyella reflecta*, Moore, sp. Cretaceous. (After Etheridge, as *Streptorhynchus Davidsoni*, *Quart. Journ. Geol. Soc.*, xxviii., t. 17, f. 1.) ? Walsh River. [Q.M.]
- Fig. 8. *Strophomena analoga*, Phillips, sp. Dorsal valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 8, f. 1). Don River. [R.D.]
- Fig. 9. Do. Dorsal valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 16, f. 7). Gympie. [R.D.]
- Fig. 10. *Productus brachythærus*, G. Sowerby. Ventral view, showing long spine-bases. Bowen River Coal Field.
- Fig. 11. Do. Dorsal view of the same specimen, with septum visible.
- Fig. 12. Do. Lateral view, showing the somewhat geniculate form of the valve.
- Fig. 13. Do. Lateral view of another example, with numerous impressions of spine-bases. Bowen River Coal Field.
- Fig. 14. *Productus cora*, D'Orbigny. Ventral valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 15, f. 1). Gympie. [R.D.]
- Fig. 15. *Productus*, sp. ind. (Compare *P. fimbriatus*, Sby.). Stanwell.
- Fig. 16. *Productus undatus*, Defrance. Portion of the ventral valve of a small individual. Stanwell.
- Fig. 17. *Productus*, sp. ind. Ventral valve, with very regular concentric laminæ. Burnett District.



Bayly & Highley del. et lit.

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CARBONIFEROUS BRACHIOPODA.

PLATE 13.

- Fig. 1. *Productus cora*, D'Orbigny. Ventral valve, decorticated. Stanwell.
- Fig. 2. *Productus longispinus*, J. Sowerby? Dorsal valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 18, f. 9). Don River.
- Fig. 3. *Productus*, sp. ind. Partially decorticated ventral valve, exhibiting large muscular impressions, &c. (to compare with *P. brachythærus*, and *P. subquadratus*, t. 38, f. 7 and 8). N.S. Wales.
- Fig. 4. *Productus*, sp. ind. Cast of a decorticated ventral valve, with prominent spine bases in the median sinus, after the type of *P. prælongus*, Davidson. Stanwell.
- Fig. 5. *Productus brachythærus*, G. Sowerby? Ventral valve, much decorticated and somewhat crushed, exhibiting decurrent spine-bases. Stanwell.
- Fig. 6. *Productus*, sp. ind. Decorticated ventral valve, with a sharp umbo, and fine, distinct, string-like costæ, after the type of *P. striatus*, Fischer. Burnett District.
- Fig. 7. *Chonetes*, sp. ind. Dorsal valve, with exceedingly numerous bifurcating costæ. (?=Figs. 8 and 11.) $\times 1\frac{1}{2}$.
- Fig. 8. *Chonetes*, sp. ind. Dorsal valve, much decorticated and highly punctate (?=Figs. 7 and 11). $\times 1\frac{1}{2}$. Athelstane Range.
- Fig. 9. *Chonetes cracowensis*, Etheridge. Dorsal valve. Great Star River Beds.
- Fig. 10. *Chonetes* (deltoid species). Ventral valve. $\times 1\frac{1}{2}$. Great Star River Beds.
- Fig. 11. *Chonetes*, sp. ind. Dorsal valve, internal cast (?=Figs. 7 and 8). Stanwell.
- Fig. 12. *Strophalosia Clarkei*, Etheridge. Ventral valve, partly an internal cast, partly with the test preserved. Bowen River Coal Field.
- Fig. 13. Do. Dorsal valve of another specimen, with the test preserved (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 17, f. 2 b). Bowen River Coal Field. [R.D.]
- Fig. 14. Do. Another specimen (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 18, f. 4). Nogoia River. [R.D.]
- Fig. 15. Do. Interior of the dorsal valve, showing dental sockets, adductor, and reniform impressions, septum, &c. Bowen River Coal Field.
- Fig. 16. Do. Interior cast of the ventral valve, showing the impressions of the cardinal and adductor muscles, channels of spine-bases, septum, &c. Bowen River Coal Field.
- Fig. 17. Do. Internal cast of the ventral valve of another specimen, with the dental sockets, and adductor and cardinal muscular impressions visible. Bowen River Coal Field.
- Fig. 18. *Strophalosia Gerardi*, King? Dorsal view, displaying concave dorsal valve, area, and umbo of ventral valve. Bowen River Coal Field.
- Fig. 19. *Lingula mytiloides*, J. Sowerby (or *L. ovata*, Dana?) Ventral valve. $\times 2$. Cania District.

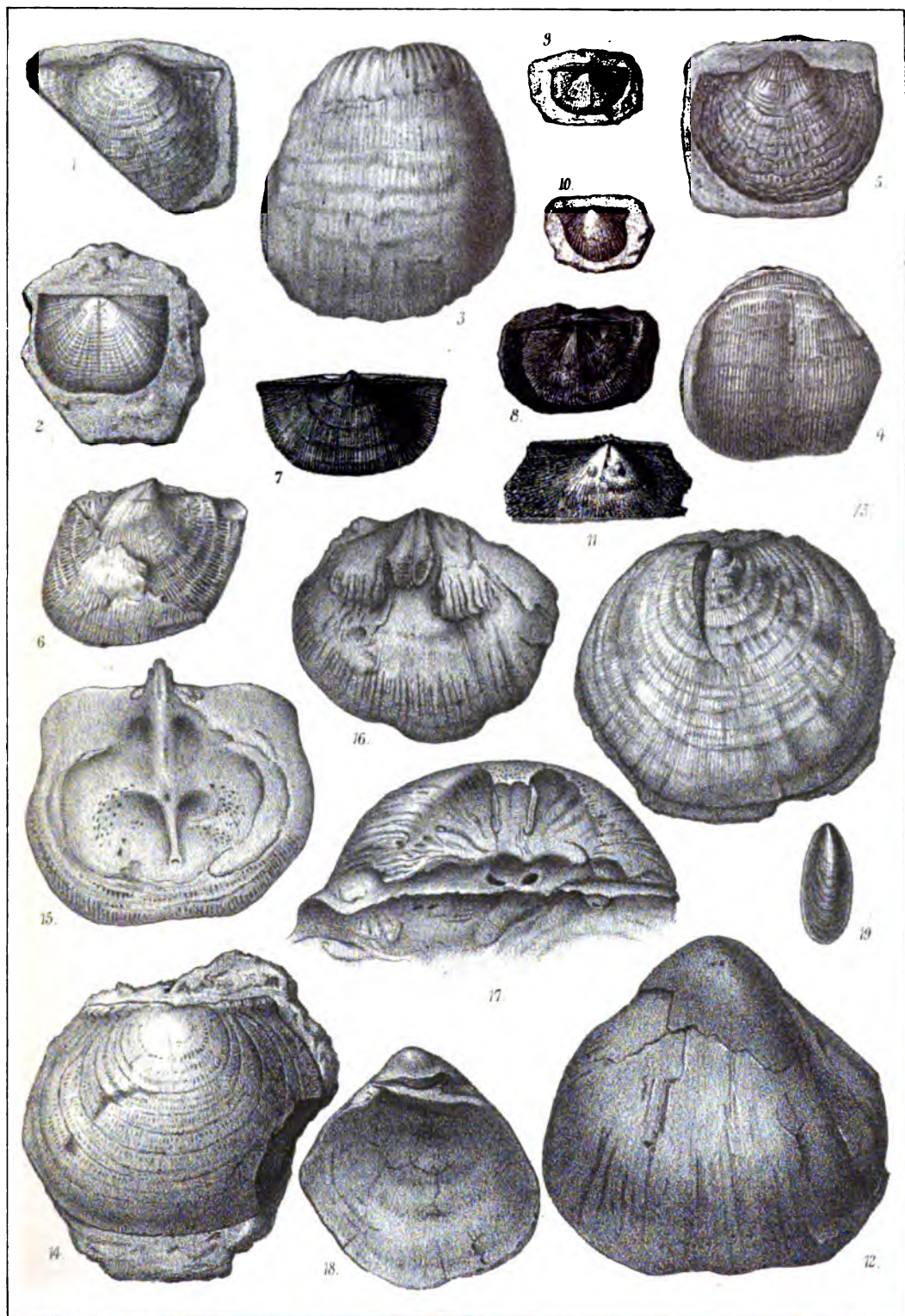


PLATE 14.

- Fig. 1. *Aviculopecten limaformis*, Morris? Anterior ear of a large valve (the remainder of the specimen is not figured). Gympie.
- Fig. 2. *Pachydomus*, sp. A badly preserved and somewhat mutilated right valve. $\frac{1}{2}$ nat. Gympie.
- Fig. 3. *Astartila cytherea*, Dana. Bowen River Coal Field.
- Fig. 4. Do. View of the hinge-line of the same specimen.
- Fig. 5. *Modiomorpha? mytiliformis*, Eth. fil. An imperfect left valve, with the umbo and anterior end removed. Banana Creek.
- Fig. 6. *Conocardium australe*, McCoy. A decorticated example. Gympie.
- Fig. 7. *Goniatites*, sp. ind. A partially decorticated example, believed to belong to this genus. Port Curtis.
- Fig. 8. *Euomphaloid Shell*. Cast of a depressed undetermined shell, with close fine ornament. Stanwell.
- Fig. 9. *Pleurotomaria* or *Mourlonia*? Decorticated specimen. Burnett District.
- Fig. 10. *Entolium*, sp. ind. A decorticated example. Great Star River.
- Fig. 11. *Cypricardella Jackii*, Eth. fil. Left valve with fine sculpture. $\times 1\frac{1}{2}$. Mount Hamilton, near Gympie.
- Fig. 12. Do. Hinge-line of the same shell. $\times 1\frac{1}{2}$.
- Fig. 13. *Modiomorpha? Daintreei*, Eth. fil. Right valve decorticated. Port Curtis.
- Fig. 14. *Pleurophorus Randsi*, Eth. fil. Right valve with median diagonal costæ. Burnett District.
- Fig. 15. *Astartella rhomboidea*, Eth. fil. Right valve with characteristic sculpture. Gympie. (This figure has been drawn rather out of position—the hinge line should be parallel to the top of the plate.)
- Fig. 16. *Solemya Edelfelti*, Eth. fil. A highly radiate species. Bowen River Coal Field.
- Fig. 17. *Nuculana*, sp. ind. A left valve, decorticated, closely resembling an American species. $\times 2$. Great Star River.
- Fig. 18. *Strophalosia Gerardi*, King. Exterior of the ventral valves. Bowen River Coal Field.
- Fig. 19. *Strophalosia Clarkei*, Etheridge. Internal cast of the ventral valve. Bowen River Coal Field.
- Fig. 20. *Mytilops*, sp. ind. A decorticated example which should be compared with *M. ? Bigsbii*, de Kon. Gympie.
- Fig. 21. *Euomphaloid Shell*. A cast, rather obliquely pressed out of shape. $\times 2$. Great Star River.
- Fig. 22. *Naticopsis* or *Platyschisma*? Decorticated example seen from the anterior. Great Star River Series.
- Fig. 23. Do. The same seen from the posterior.

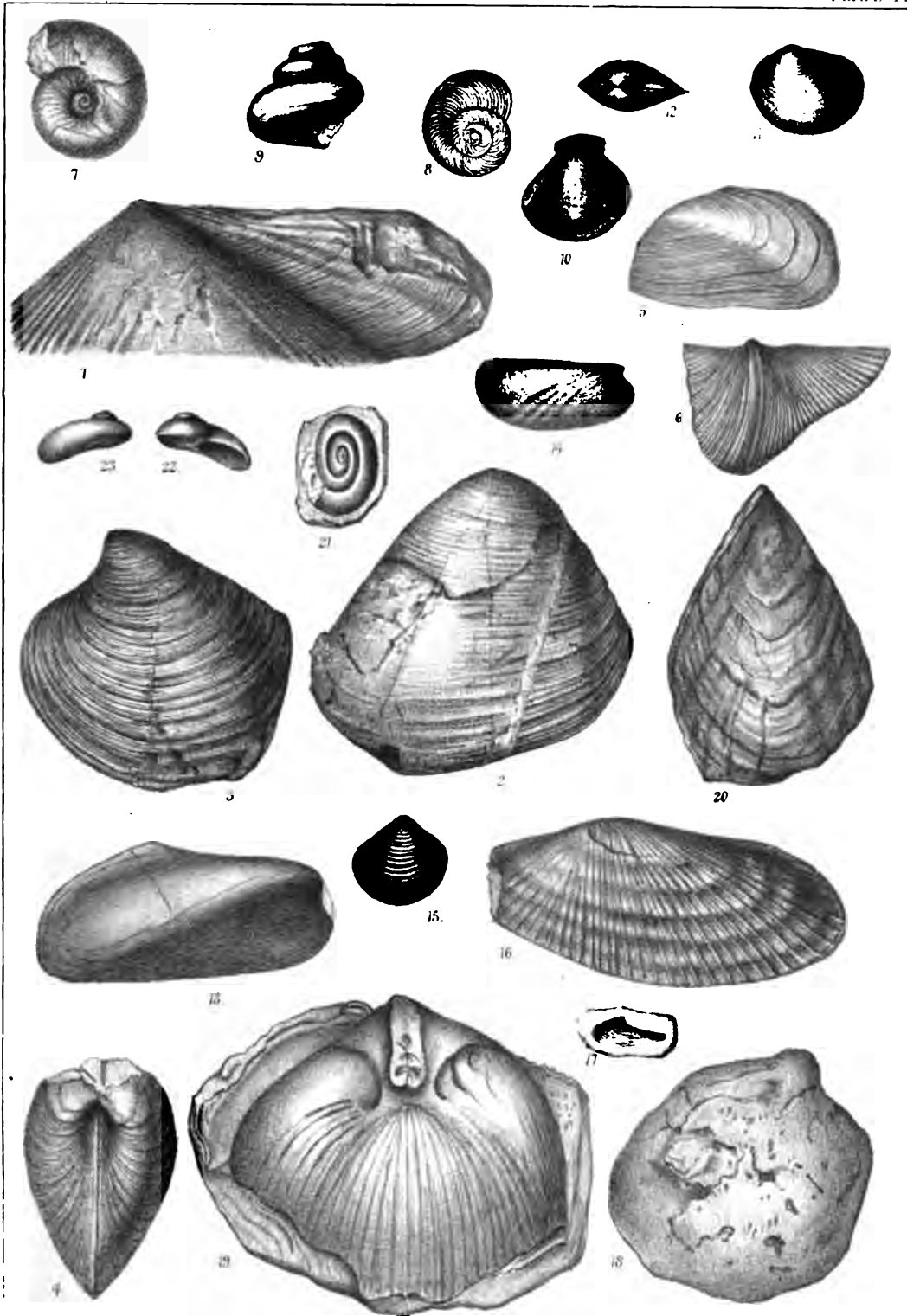
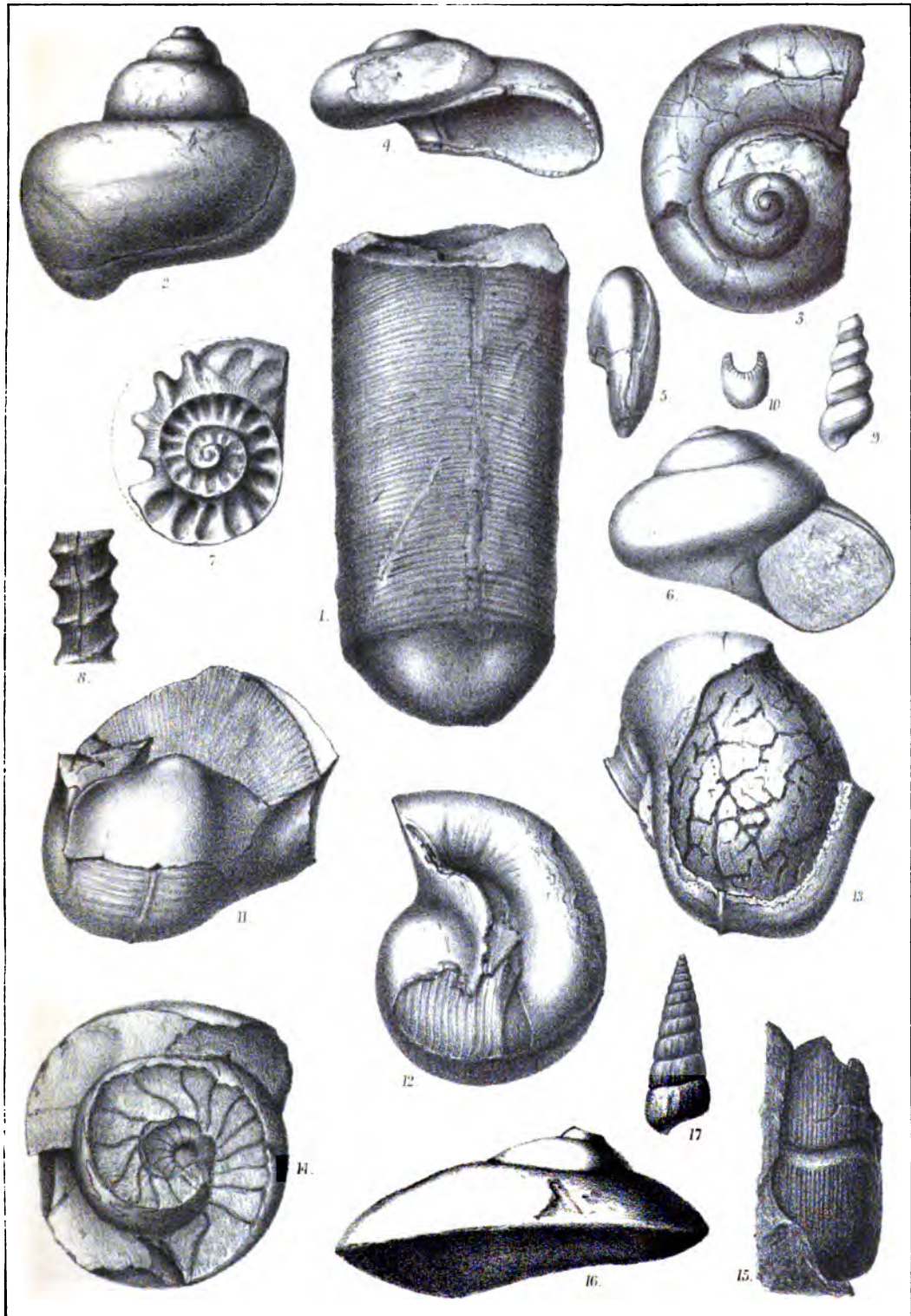


PLATE 15.

- Fig. 1. *Orthoceras*, sp. ind. Showing traces of a lateral siphuncle. Gympie.
- Fig. 2. *Mourlonia Strzeleckiana*, Morris, sp. Cast with faint indications of the band.
- Fig. 3. *Platyschisma oculus*, J. de C. Sowerby, sp. A crushed and somewhat distorted example. Stanwell.
- Fig. 4. Do. Side front view of the same specimen.
- Fig. 5. *Goniatites?* sp. ind. A narrow, undetermined form. Gympie.
- Fig. 6. *Platyschisma rotundata*, Etheridge. Anterior view, with aperture (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 18, f. 3). Cracow Creek. [R.D.]
- Fig. 7. *Porcellia Pearsi*, Eth. fil. Imperfect lateral impression. $\times 2$. Great Star River Series.
- Fig. 8. Do. Back with spiral striæ, and elongated tubercles. $\times 2$.
- Fig. 9. *Murchisonia carinata*, Etheridge. Posterior view of four whorls (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 18, f. 5). Don River. [R.D.]
- Fig. 10. *Naticopsis harpæformis*, Etheridge. Fragment of a whorl (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 18, f. 6). [R.D.]
- Fig. 11. *Bellerophon stanvelliensis*, Eth. fil. Anterior view with portion of aperture, reflected inner lip, and alar expansion. Stanwell.
- Fig. 12. Do. Side view.
- Fig. 13. Do. Posterior view.
- Fig. 14. *Goniatites*, sp. ind. Fractured specimen showing inner whorls, and septa Rockhampton District.
- Fig. 15. Do. Part of back of the same specimen, with spiral striæ, and growth-varex. Rockhampton.
- Fig. 16. *Pleurotomaria carinata*, Etheridge. An internal cast, probably distorted (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 15, f. 6). Gympie. [R.D.]
- Fig. 17. *Loxonema*, sp. ind. Posterior view. Stanwell.



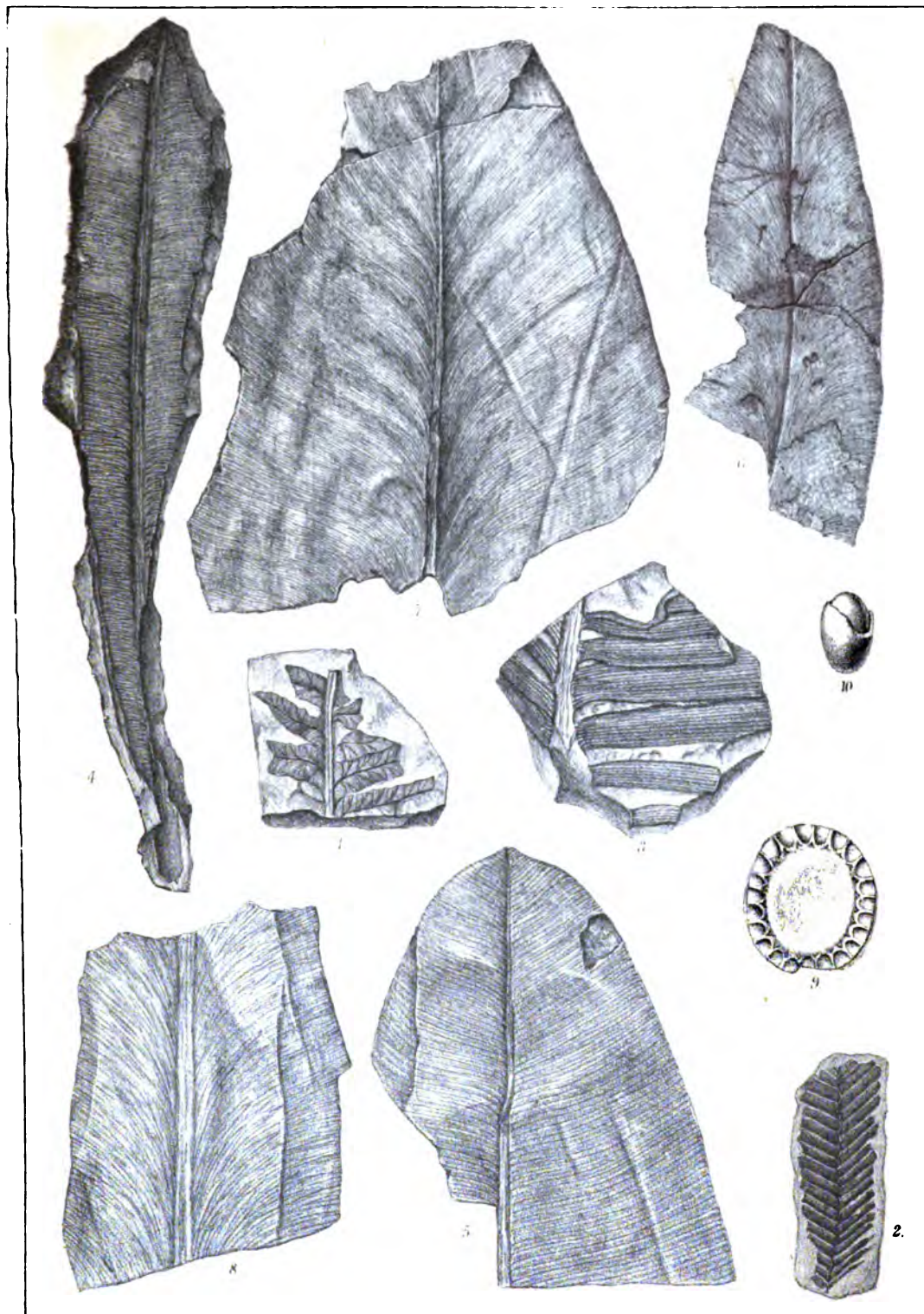
Bryceau & Highley del. et lith.

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CARBONIFEROUS GASTEROPODA & CEPHALOPODA.

PLATE 16.

- Fig. 1. *Alethopteris australis*, Morris, sp. Portion of a small pinna. Ipswich Coal Measures, Colinton.
- Fig. 2. *Ptilophyllum oligoneurum*, Ten. Woods? Part of a small frond. Burrum Coal Measures.
- Fig. 3. *Pterophyllum*, sp. ind. (Compare *P. Carterianum*, O. and M.) Ipswich Coal Measures, Colinton.
- Fig. 4. *Tæniopteris*, sp. ind. Portion of a large frond, at present undetermined. (The anastomosis of the venules is an error.) Mount Esk.
- Fig. 5. *Macrotæniopteris crassinervis*, Feistmantel?. Apex of a large frond. Wycarbah.
- Fig. 6. *Glossopteris*, sp. ind. Portion of a finely-grained frond. Near Townsville.
- Fig. 7. *Glossopteris ampla*, Dana. Part of a frond. Near Townsville.
- Fig. 8. *Glossopteris Browniana*, Brongniart. Portion of a frond. Near Townsville.
- Fig. 9. *Equisetaceous Phragma*. Stewart's Creek, Rockhampton. $\times 2$.
- Fig. 10. *Cycadinocarpus*?, sp. ind. A Cycadaceous seed. Wycarbah.



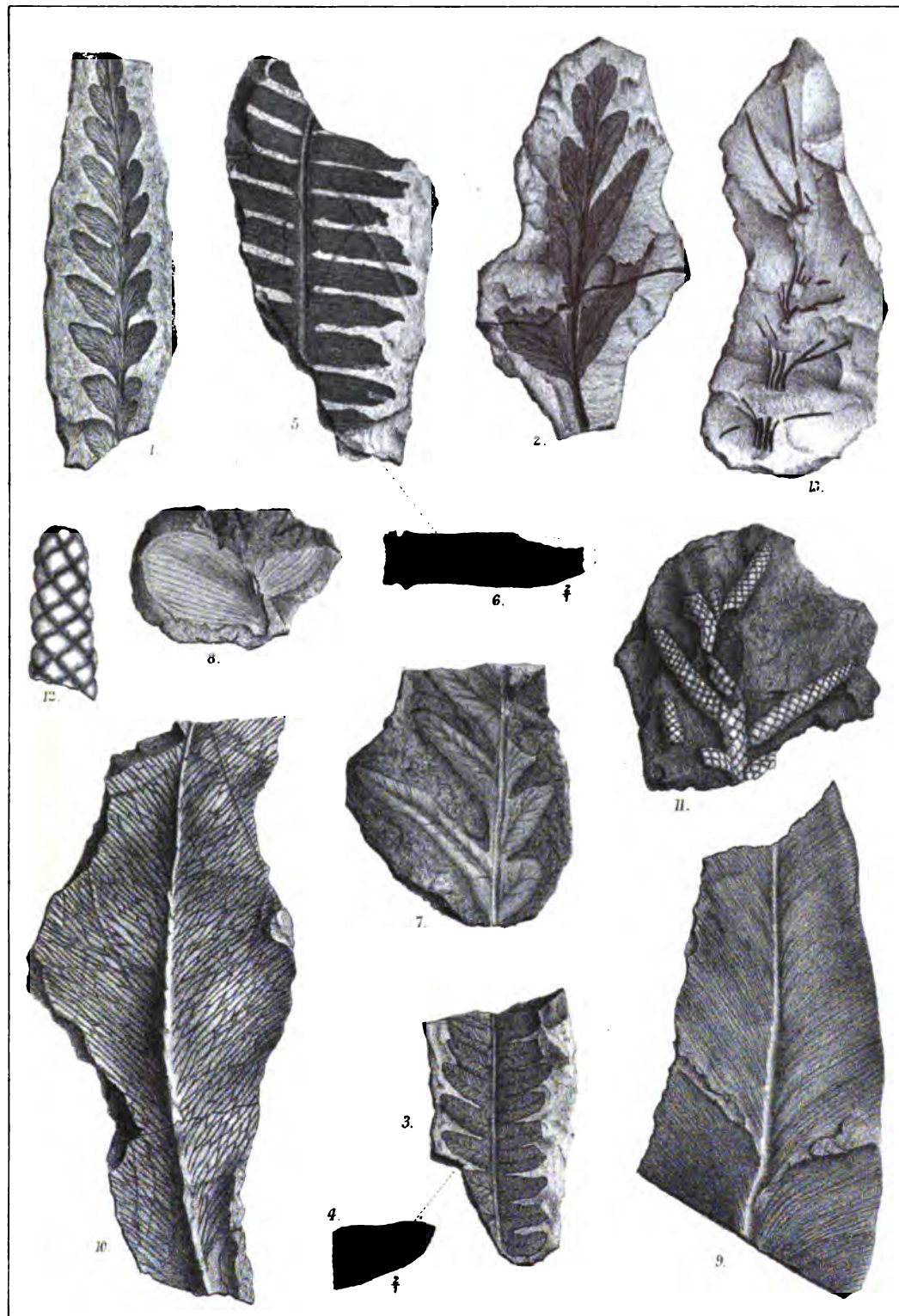
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Museum Proc. imp.

CARBONIFEROUS PLANTS

PLATE 17.

- Fig. 1. *Thinnfeldia odontopteroides*, Morris, sp. Terminal portion of a pinna. Ipswich Coal Measures.
- Fig. 2. *Thinnfeldia media*, Ten. Woods ?, or *T. indica*, Feistmantel? Burrum Coal Measures.
- Fig. 3. *Alethopteris Lindleyana* (Royle), Feistmantel? Mount Esk.
- Fig. 4. Do. Pinnule enlarged.
- Fig. 5. *Pterophyllum abnorme*, Eth. fil. Mount Esk.
- Fig. 6. Do. Pinnule enlarged, showing veins and venules.
- Fig. 7. *Thinnfeldia odontopteroides*, Morris, var. Portion of a pinna unsymmetrically lobed. Kilcoy Range.
- Fig. 8. *Otozamites?* sp. ind. Portion of two pinnules. Burrum Coal Measures.
- Fig. 9. *Glossopteris Browniana*, Brongniart. Fine-veined frond. Cooktown.
- Fig. 10. *Glossopteris Browniana*, Brongniart. Large, coarsely-reticulated variety. Bowen River Coal Field. (Fresh Water or Upper Series.)
- Fig. 11. *Brachyphyllum crassum*, Ten. Woods. Ipswich Coal Measures.
- Fig. 12. Do. Fragment enlarged.
- Fig. 13. *Phyllothea australis*, Brongniart. Bowen River Coal Field. (Upper or Fresh Water Series.)



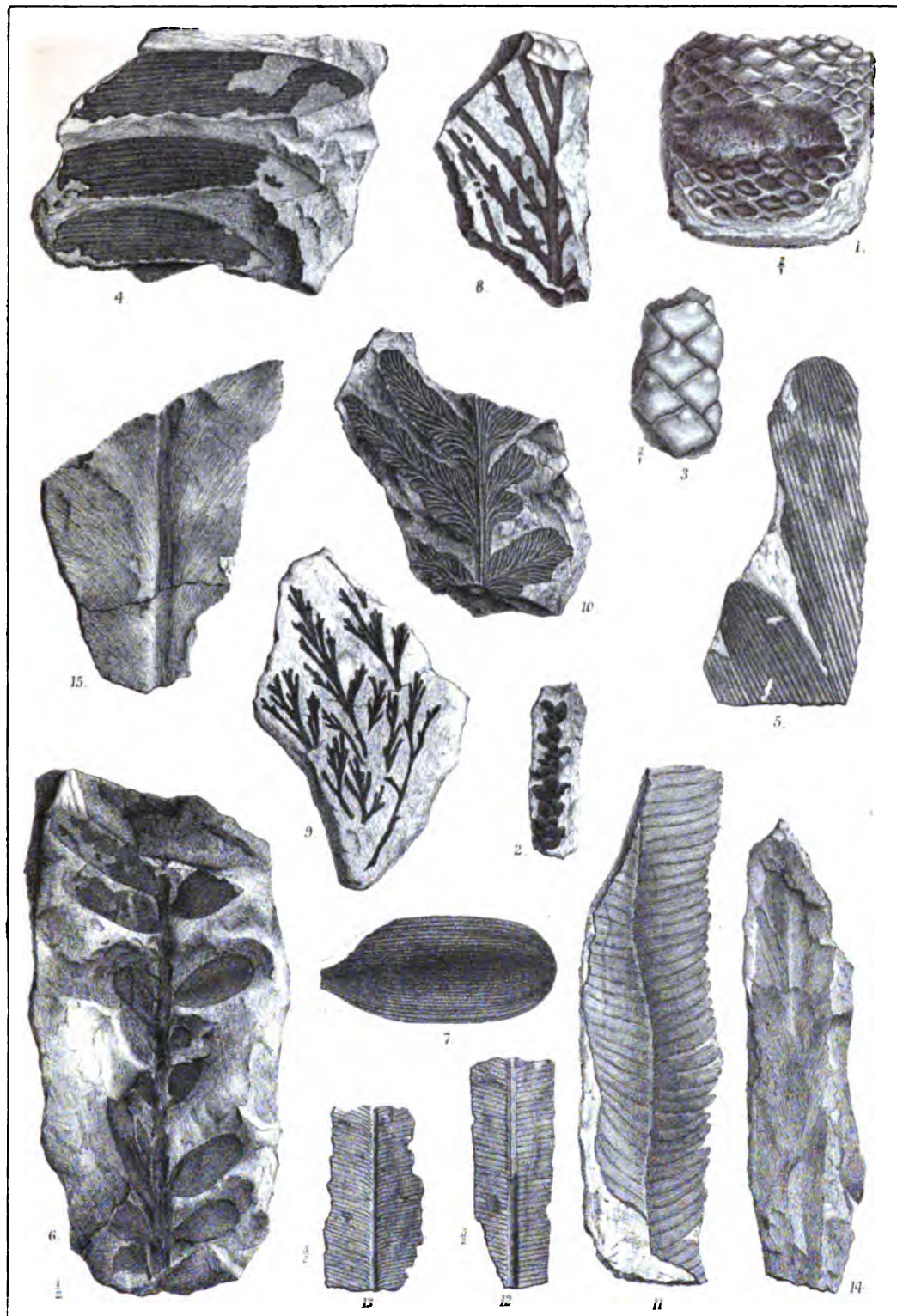
Berjeau & Highbly del. et lith.

Mintern Bros. imp.

PERMO-CARBONIFEROUS & LOWER MEZOZOIC PLANTS.

PLATE 18.

- Fig. 1. *Araucarites polycarpa*, Ten. Woods? Portion of a cone. $\times 2$. Stewart's Creek, Rockhampton.
- Fig. 2. *Brachyphyllum crassum*, Ten. Woods. A small branch, but uncompressed. Ipswich Coal Measures.
- Fig. 3. Do. Another specimen with the apical mucro to each leaf base. $\times 1\frac{1}{2}$. Rosewood, near Ipswich.
- Fig. 4. *Podozamites*, sp. ind. Three pinnules of a peculiar form. Burrum Coal Measures.
- Fig. 5. Do. Broader pinnules than those of Fig. 4. Mount Esk.
- Fig. 6. *Podozamites Kidstoni*, Eth. fl. Part of a frond of a peculiar type, with pinnules varying according to position. $\times 2$. Burrum Coal Measures.
- Fig. 7. Do. A pinnule enlarged.
- Fig. 8. *Trichomanites spinifolium*, Ten. Woods. A stouter variety than the type figure. Mount Esk.
- Fig. 9. *Trichomanites laxum*, Ten. Woods? Burrum Coal Measures.
- Fig. 10. *Thinnfeldia media*, Ten. Woods, or *T. indica*, Feistmantel? Colinton.
- Fig. 11. *Ptilophyllum oligoneurum*, Ten. Woods. Wycarbah.
- Fig. 12. *Teniopteris Daintreei*, McCoy? Portion of a frond, with direct and very slightly oblique veins. Stewart's Creek, Rockhampton.
- Fig. 13. Do. Another example, with the veins less direct. Stewart's Creek, Rockhampton.
- Fig. 14. *Glossopteris linearis*, McCoy. A small example. (This figure is defective.) Cooktown.
- Fig. 15. *Glossopteris Browniana*, Brongniart. Portion of a frond with fine veins. Near Cooktown.



Berjeau & Highley del. et lith.

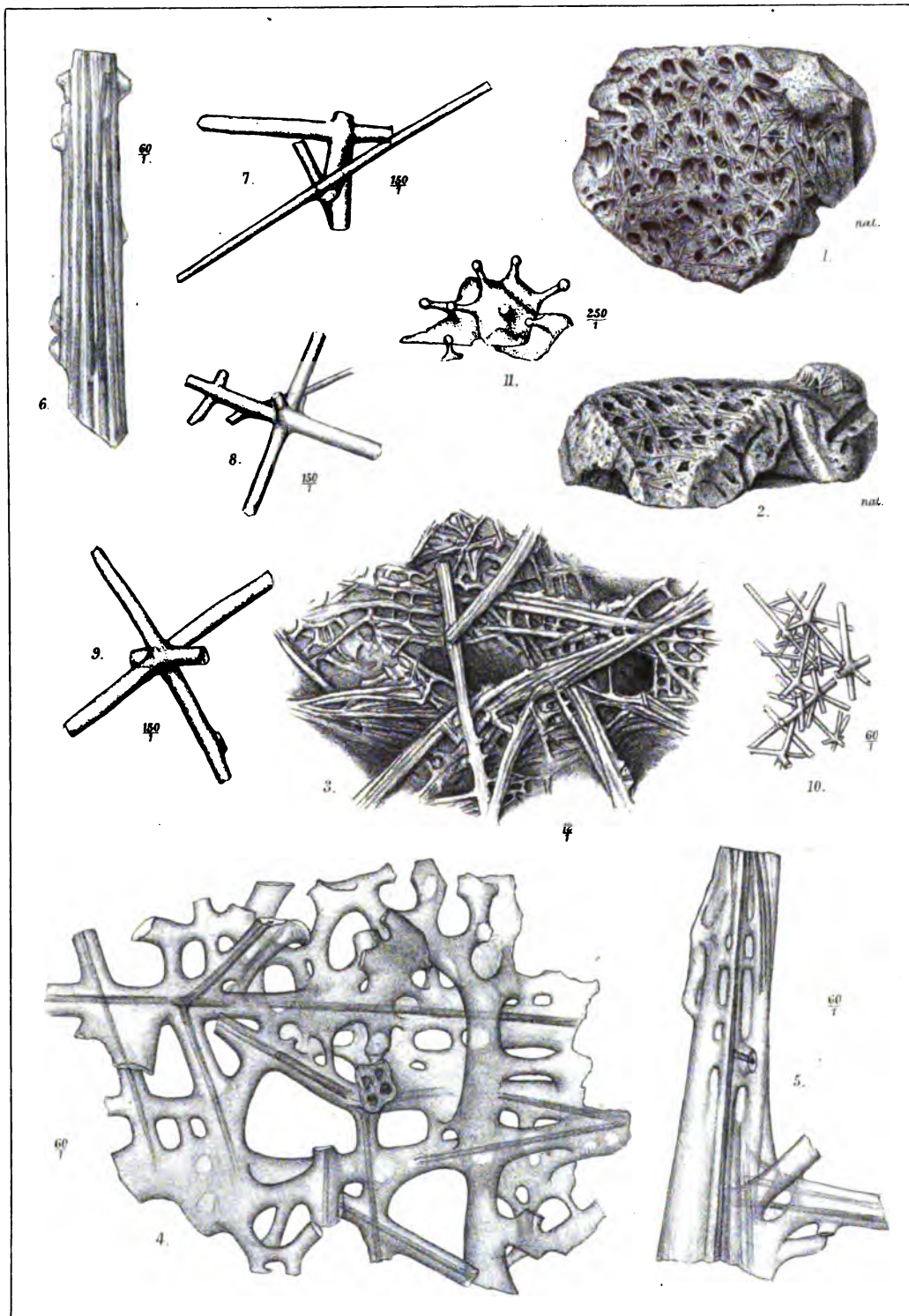
Mintern Bros. imp.

PLATE 19.

Purisiphonia Clarkei, Bowerbank.

- Fig. 1. A fragment of the wall of the sponge, showing the outer surface and the apertures of the canals. Natural size. Drawn from the type specimen, described by Dr. Bowerbank, and now in the British Museum of Natural History, South Kensington.
- Fig. 2. The same specimen viewed laterally, showing the thickness of the wall and the course of some of the canals.
- Fig. 3. A portion of the outer surface, enlarged 12 diameters, showing the disposition of the fascicles of linear spicules and the oscular apertures.
- Fig. 4. A fragment of the spicular-mesh of the interior of the sponge-wall, showing its irregular character. Enlarged 60 diameters.
- Figs. 5 and 6. Fragments of the fascicles of the linear spicules. Enlarged 60 diameters.
- Figs. 7, 8, and 9. Entire and fragmentary hexactinellid spicules from the interspaces of the spicular-mesh. Enlarged 150 diameters.
- Fig. 10. A group of minute hexactinellid spicules, confusedly intermingled and cemented together. They occur in the canals of the sponge-wall. Enlarged 60 diameters.
- Fig. 11. Portions of rosette flesh-spicules. Enlarged 250 diameters. Drawn from the slide in the possession of Mr. H. J. Carter, F.R.S. [All B.M.]

G. J. H.



Perceux & Highley del. et lith

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CRETACEO-JURASSIC SPONGIDA.

PLATE 20.

- Fig. 1. *Pentacrinus australis*, Moore. Exterior of about two-thirds of the calyx, with portions of five arms (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 17, f. 3). Mitchell Downs. [W.B.C.]
- Fig. 2. Do. Interior of the calyx, with portions of four arms (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 18, f. 1). Mitchell Downs. [W.B.C.]
- Fig. 3. Do. Portions of arms (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 18, f. 1). Mitchell Downs. [W.B.C.]
- Fig. 4. *Æschna flindersensis*, H. Woodward. Proximal half of one of the posterior wings, showing nervures (after Woodward, *Geol. Mag.*, 1884, 1, t. 11, f. 1). $\times 2$. Flinders River.
- Fig. 5. *Lepralia oolitica*, Moore, encrusting a foreign body (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 17, f. 2). Wollumbilla. (The original is a very unsatisfactory and indefinite representation.) [W.B.C.]
- Fig. 6. Do. Three cells much enlarged (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 17, f. 2a).
- Fig. 7. *Terebratella Davidsoni*, Moore. Ventral valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 2). Wollumbilla. [W.B.C.]
- Fig. 8. Do. Dorsal valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 1). [W.B.C.]
- Fig. 9. *Argiope wollumbillaensis*, Moore. Dorsal valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 3). $\times \frac{1}{2}$. Wollumbilla. [W.B.C.]
- Fig. 10. Do. Ventral valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 4). $\times \frac{1}{2}$. Wollumbilla. [W.B.C.]
- Fig. 11. Do. Interior of the dorsal valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 5). $\times \frac{1}{2}$. Wollumbilla. [W.B.C.]
- Fig. 12. *Argiope punctata*, Moore. Dorsal valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 6). Wollumbilla. Enlarged. [W.B.C.]
- Fig. 13. *Rhynchonella rustica*, Moore. Dorsal valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 7). Wollumbilla. [W.B.C.]
- Fig. 14. *Lingula ovalis*, Sowerby? Half of a ventral valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 14). Wollumbilla. [W.B.C.]
- Fig. 15. *Discina apicalis*, Moore. A very unsatisfactory and indefinite figure as in the original (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 15). Wollumbilla. [W.B.C.]
- Fig. 16. *Pinna*, sp. ind. (compare *P. laticostata*, Stoliczka). Part of the united valves of a very large specimen. $\frac{1}{2}$ nat.
- Fig. 17. Do. Section of the same. $\frac{1}{2}$ nat.
- Fig. 18. *Maccoyella*? sp. ind. A decorticated valve which may be a species of this genus.
- Fig. 19. *Rhynchonella solitaria*, Moore. Ventral valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 10). Wollumbilla. [W.B.C.]

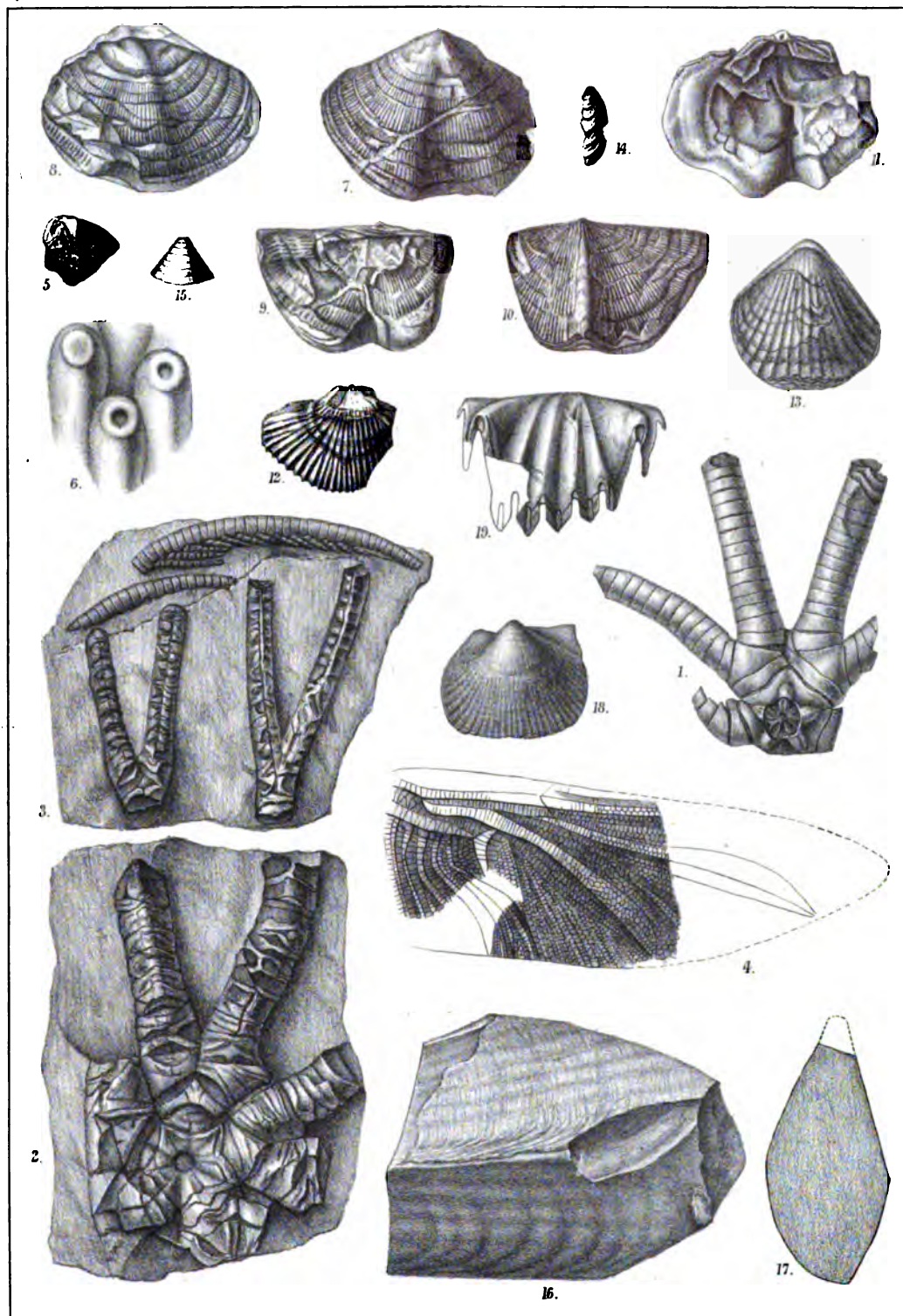
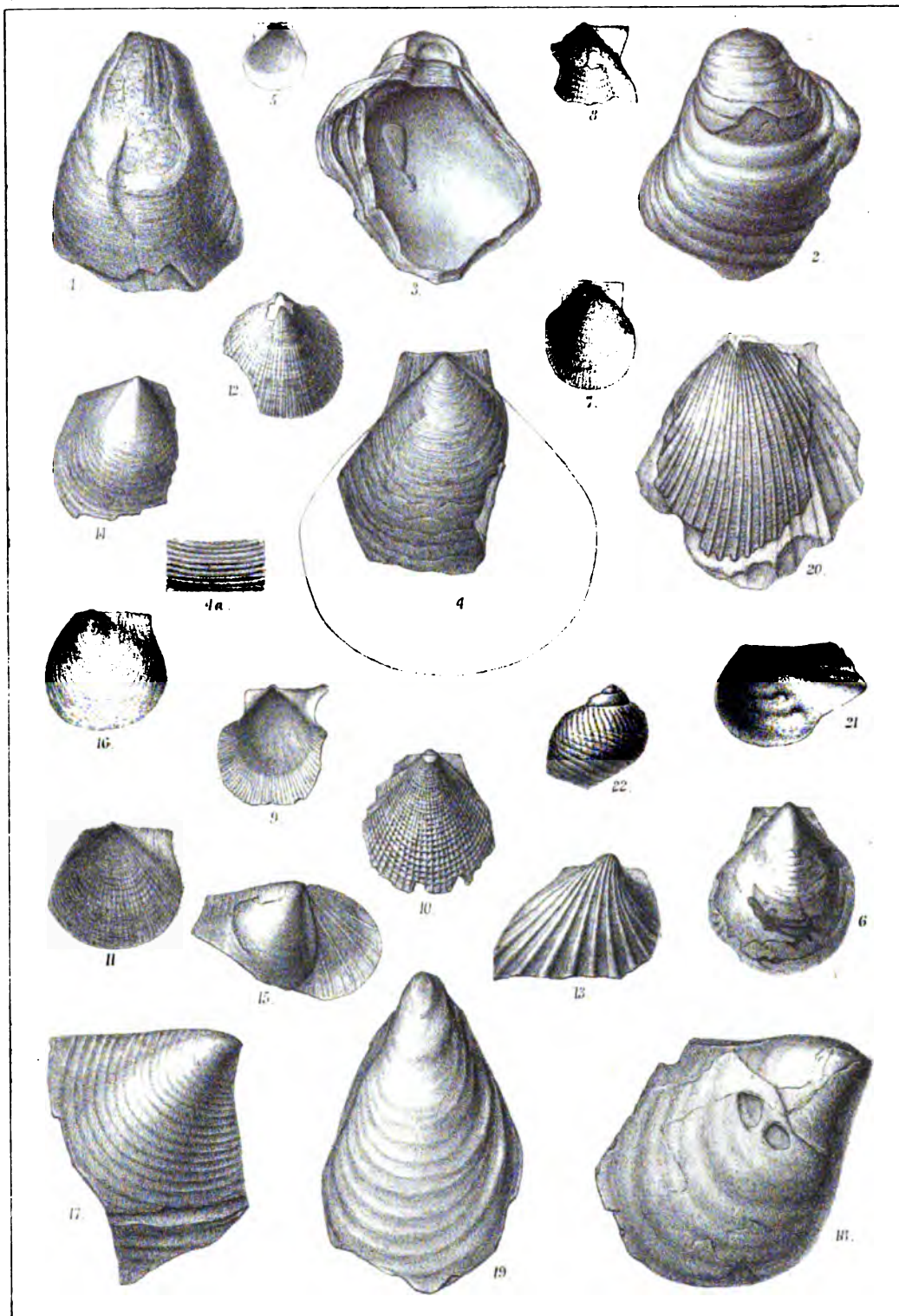


PLATE 21.

- Fig. 1. *Ostrea vesiculosa*, J. Sowerby. Attached valve with lobe undeveloped. Chollarton.
- Fig. 2. Do. Attached valve with a concentrically furrowed surface, and with remains of a lateral lobe. Chollarton.
- Fig. 3. Do. Interior of Fig. 2, showing the cartilage furrows, &c. Chollarton.
- Fig. 4. *Amusium*, sp. ind. (comp. *A. sulcatellum*, Stoliczka). Small portion of one valve with the ears preserved, but the general surface rather decorticated. Rockwood.
- Fig. 4a. Do. Surface enlarged.
- Fig. 5. *Pecten*, sp. ind. (? *P. socialis*, Moore, or *P. psila*, Ten. Woods). A small valve seen from the inside. $\times 2$. Mitchell bore.
- Fig. 6. *Pecten socialis*, Moore. Valve devoid of ornament (after Moore, *Quart. Journ. Geol. Soc.*, xxvi, t. 11, f. 9). Wollumbilla. [W.B.C.]
- Fig. 7. Do. Valve with square ears and an ornament of divaricating lines, seen from the inside. Rockwood.
- Fig. 8. *Pecten æquilineatus*, Moore? Fragment of a valve seen from the interior with the external reticulate structure visible through the thin shell. Aramac.
- Fig. 9. *Pecten socialis*, Moore. Valve with the same general appearance as Fig. 7 and divaricating lines, but with a larger ear. $\times 1\frac{1}{2}$. Aramac.
- Fig. 10. *Pecten æquilineatus*, Moore. Valve seen from the exterior, showing surface cancellation, but ears not perfect (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 11). Wollumbilla. [W.B.C.]
- Fig. 11. *Pecten*, sp. ind. An ill-preserved specimen seen from the inside, thin-shelled and highly cancellated. Possibly allied to Fig. 12. Isis River.
- Fig. 12. *Pecten braamburiensis*, Moore (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 5). Wollumbilla. [W.B.C.]
- Fig. 13. *Lima? Randsi*, Eth. fil. A decorticated imperfect valve. Maryborough.
- Fig. 14. *Undetermined Bivalve*. $\times 1\frac{1}{2}$. Coreena Woolshed.
- Fig. 15. Do. Two valves displaced, probably of the same species. $\times 1\frac{1}{2}$. Aramac.
- Fig. 16. Do. Resembling genus *Meleagrinella*, Whitfield. $\times 1\frac{1}{2}$. Aramac.
- Fig. 17. *Inoceramus Cripsi*, Mantell? Portion of a valve with concentric corrugations. Aramac Well.
- Fig. 18. Do. Another specimen partially decorticated and worn.
- Fig. 19. *Inoceramus*, sp. ind. (? Young of *I. pernoides*, Etheridge.) Evora.
- Fig. 20. *Pecten? Moorei*, Eth. fil. Portion of a valve, probably a *Maccoyella* (*P. fimbriatus*, Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 8). Wollumbilla. [W.B.C.]
- Fig. 21. *Trigonia*, sp. ind. Interior of a partially preserved valve. Blackall.
- Fig. 22. *Natica Jackii*, Eth. fil. Julia Creek.

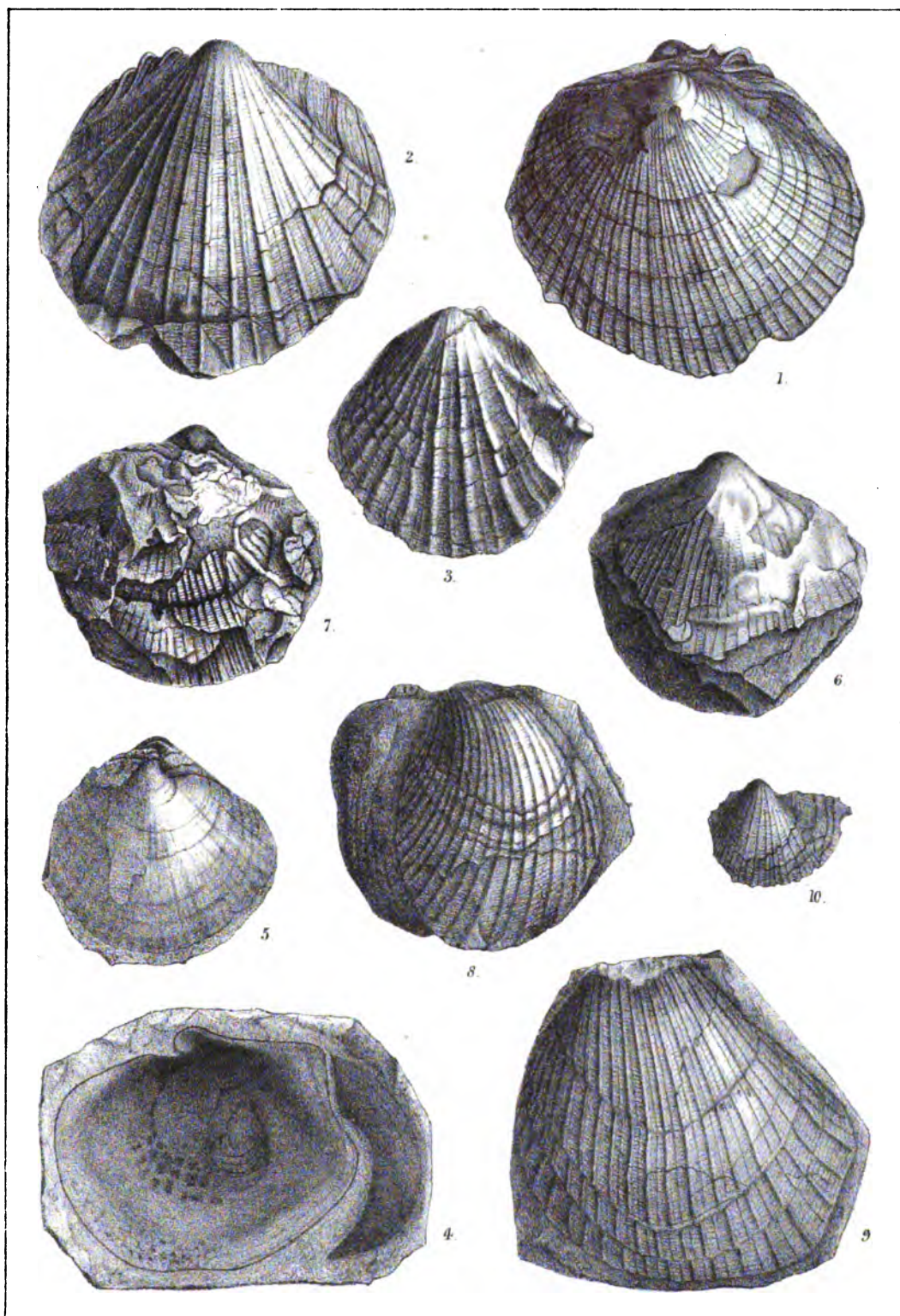


Bergman & Hightley del. et lith.

Mintern Bros. imp.

PLATE 22.

- Fig. 1. *Maccoyella Barklii*, Moore, sp.? Right valve with the umbo and anterior ear-corrugations of the left valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 2). Wollumbilla. [W.B.C.]
- Fig. 2. Do. Left valve with posterior flattened ear, and ridges of the anterior ear well shown (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 1). Wollumbilla. [W.B.C.]
- Fig. 3. Do. var. *mariaeburiensis*, Eth. fil. Left valve of a well-marked variety with rugged radiating costæ, the posterior spinose. Maryborough.
- Fig. 4. *Maccoyella Barklii*, Moore, sp. Interior of a right valve, showing expanded posterior wing sub-central, and supplementary muscular scars, and deeply divided anterior lobe. Maryborough.
- Fig. 5. Do. A small individual, with the valves in apposition, the costæ of the right valve but faintly preserved. Walsh River.
- Fig. 6. *Maccoyella umbonalis*, Moore, sp. Left valve, showing the more or less equilateral form, gibbous umbonal region, and numerous equal radiating costæ (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 3). Wollumbilla. [W.B.C.]
- Fig. 7. Do. Right valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 2). Wollumbilla. [W.B.C.]
- Fig. 8. *Maccoyella corbiensis*, Moore, sp. Left valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 7). Mount Corby. [W.B.C.]
- Fig. 9. Do. Cast taken from an impression corresponding generally with this species, but possessing intermediate costæ. Maryborough.
- Fig. 10. *Maccoyella? substriata*, Moore, sp. Right valve enlarged, showing the large posterior wing and intercostal ribs (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 6). Wollumbilla. [W.B.C.]



Berjeau & Highley del et lith.

Mintern Bros. imp.

CRETACEO-JURASSIC PELECYPODA.

PLATE 23.

- Fig. 1. *Maccoyella reflecta*, Moore, sp.? Left valve much weather-worn. Walsh River.
- Fig. 2. Do. Right valve of the same specimen with the deeply divided ear.
- Fig. 3. Do. Two valves mechanically united although displaced (after Moore, *Quart. Journ. Geol. Soc.*, xvi. t. 12, f. 1). $\frac{1}{2}$ nat. [W.B.C.]
- Fig. 4. *Maccoyella umbonalis*, Moore, sp.? Right valve of a large example, an impression in which the true shelly layers have been removed. Maryborough. It is possible that this may be a distinct species. $\frac{1}{2}$ nat.
- Fig. 5. *Maccoyella reflecta*, Moore, sp. Portion of a right valve, the radiating costæ obliterated by abrasion. Mount Abundance.
- Fig. 6. Do. Hinge of the same specimen from the interior, with the cartilage furrows, byssal sinus, &c., visible.
- Fig. 7. Do. The same, the hinge seen from above.
- Fig. 8. *Maccoyella? substriata*, Moore, sp.? Probably the flat valve of Fig. 9. Hughenden.
- Fig. 9. Do. An inequilateral, somewhat oblique shell, with a long upwardly curved hinge. Hughenden.
- Fig. 10. *Maccoyella reflecta*, var. *Gilliatti*, Ten. Woods. Right valve, with numerous close, radiating, and somewhat thick costæ (after Woods, *Proc. Linn. Soc. N.S. Wales*, viii., t. 12, f. 5). Grey Ranges.

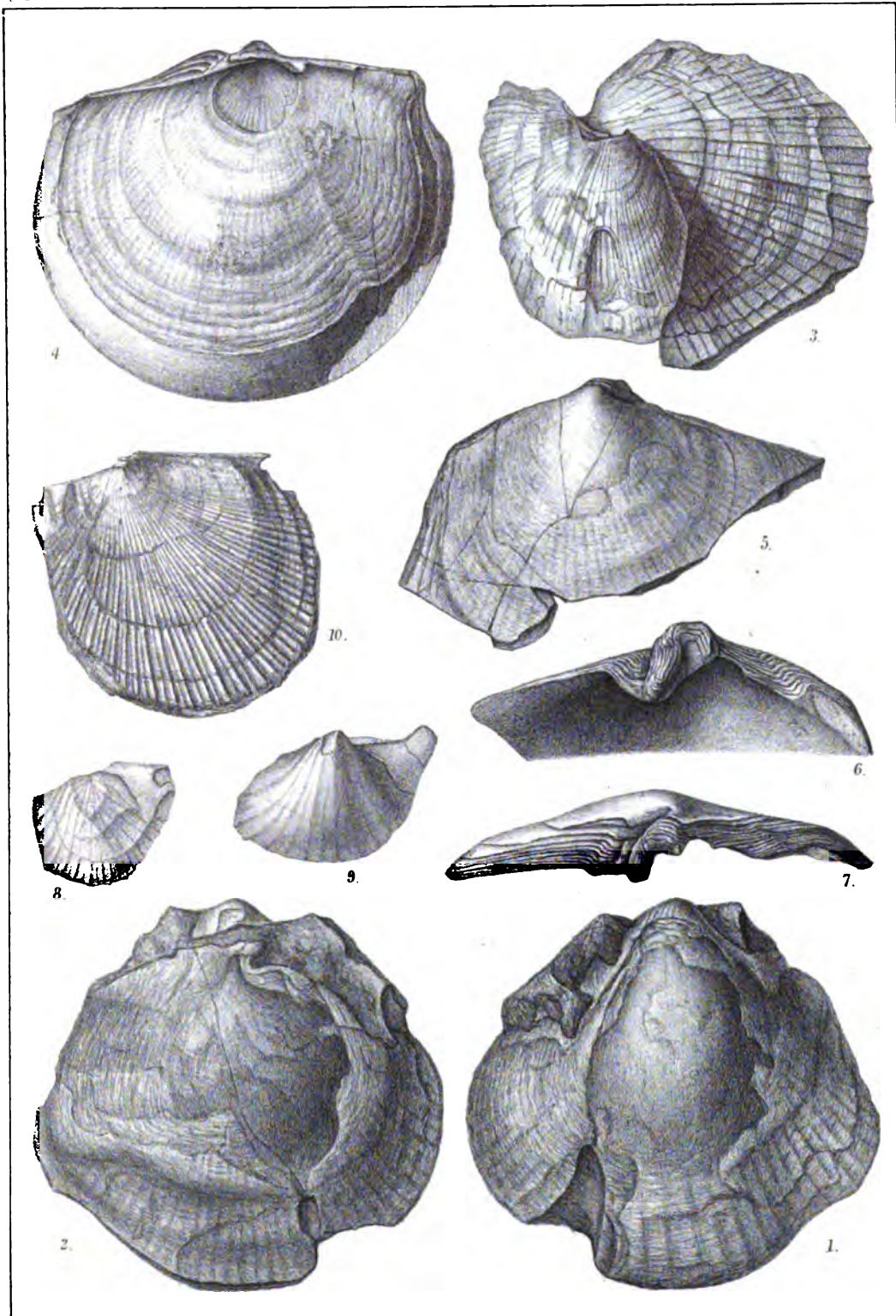
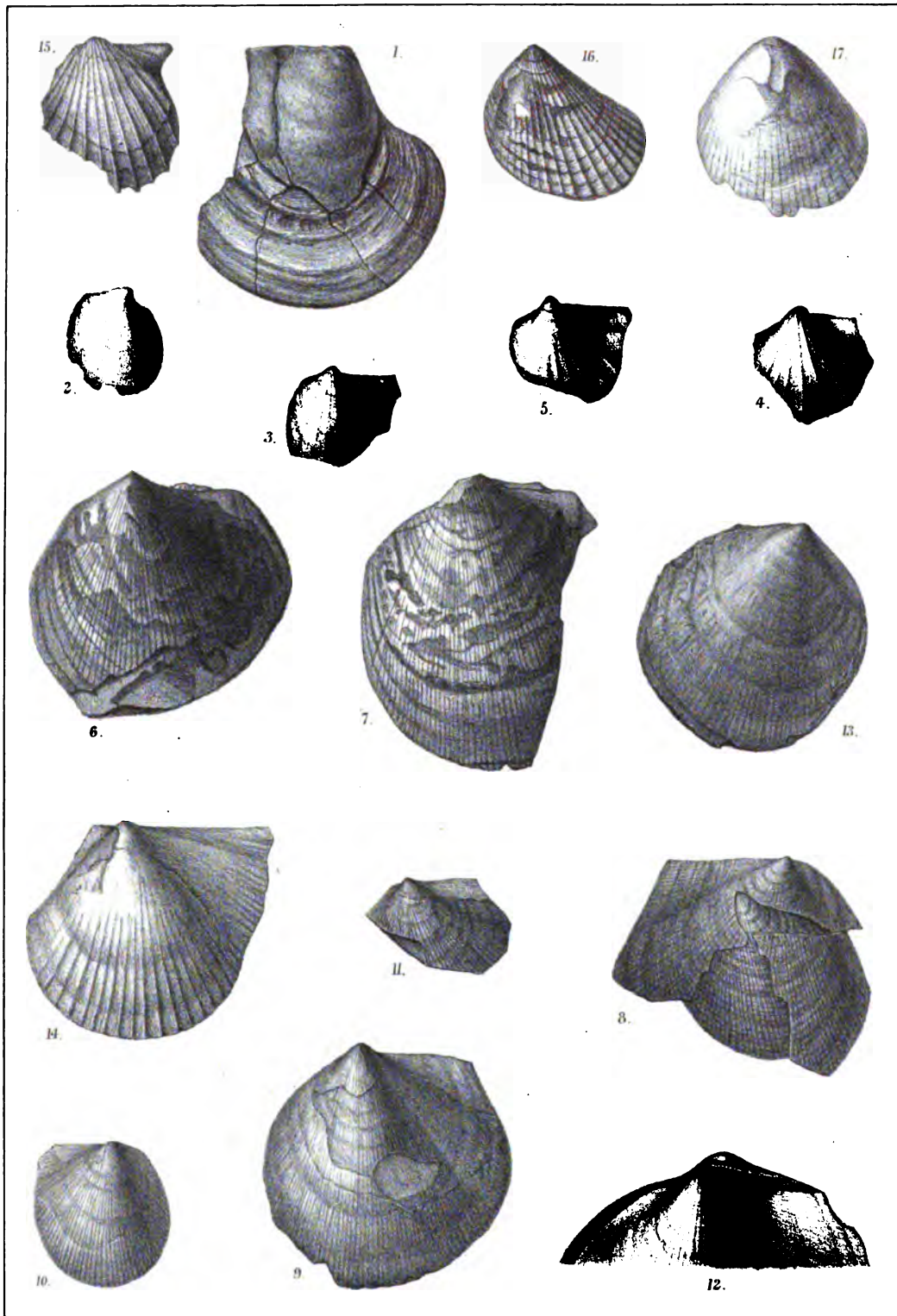


PLATE 24.

- Fig. 1. *Undetermined Bivalve*. Portion of a compressed or flattened valve, without costæ, but possessing strong concentric laminæ. Richmond Downs Station.
- Fig. 2. *Oxytoma? simplex*, Moore, sp. (= *Avicula equalis*, Moore.) A correct figure of Moore's, t. 11, f. 3 (*Quart. Journ. Geol. Soc.*, xxvi.), with the posterior wing removed. $\times 4$. Wollumbilla. [P.S.B.]
- Fig. 3. Do. Left valve, much broken along the postero-ventral region, and possessing seven or eight costæ (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 11, f. 4). $\times 4$. Wollumbilla. [P.S.B.]
- Fig. 4. Do. Left valve with a rather smaller posterior wing, and about the same number of costæ as Fig. 3. $\times 2$. Minmi, near Roma.
- Fig. 5. Do. Left valve, with well-developed posterior wing and eight costæ (*Avicula plicata*, after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 6). "Enlarged." Wollumbilla. [W.B.C.]
- Fig. 6. *Pseudavicula anomala*, Moore, sp. Left valve (after Moore, as *Lucina? anomala*, *Quart. Journ. Geol. Soc.*, xxvi., t. 14, f. 4). Wollumbilla. [W.B.C.]
- Fig. 7. *Pseudavicula australis*, Moore, sp. Left valve (after Moore, as *Lucina australis*, *Quart. Journ. Geol. Soc.*, t. 14, f. 5). Wollumbilla. [W.B.C.]
- Fig. 8. *Pseudavicula anomala*, Moore, sp. Two valves compressed one on the other. $\times 2$. Maranoa River.
- Fig. 9. *Pseudavicula australis*, Moore, sp. Left valve with worn surface, the shelly matter removed about the region of the adductor. Coottanoonna, S. Australia.
- Fig. 10. Do. A small right valve.
- Fig. 11. *Pseudavicula anomala*, Moore, sp. Portion of a small left valve. Maranoa River.
- Fig. 12. *Pseudavicula australis*, Moore, sp. Valves in apposition, but rather displaced, showing hinge. $\times 2$. Coottanoonna, S. Australia.
- Fig. 13. Do. Right valve much worn (after Hudleston, as *Avicula orbicularis*, *Geol. Mag.*, 1884, 1, t. 11, f. 10). Peak District, South Australia. [B.M.]
- Fig. 14. *Pseudavicula alata*, Etheridge. Decorticated left valve (after Etheridge, as *Avicula alata*, *Quart. Journ. Geol. Soc.*, xxviii., t. 20, f. 8). Maryborough. [B.D.]
- Fig. 15. *Oxytoma rockwoodensis*, Eth. fil. Left valve. Rockwood.
- Fig. 16. *Lima Gordoni*, Moore. Left valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 4). Wollumbilla. [W.B.C.]
- Fig. 17. *Lima? multistriata*, Moore (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 5). Wollumbilla. [W.B.C.]



Barbeau & Highley del. et lith.

Minter Bros. imp.

PLATE 25.

- Fig. 1. *Aucella hughendenensis*, Etheridge. Left valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 25, f. 3). Hughenden. [R.D.]
- Fig. 2. Do. Surface sculpture of the same. $\times 4$.
- Fig. 3. Do. Left valve somewhat imperfect. Barcoo River.
- Fig. 4. Do. Right valve, with the anterior ear broken off. Barcoo River.
- Fig. 5. Do. A similar, but smaller and rather more transverse example. $\times 2$.
Upper Flinders River.
- Fig. 6. Do. Right valve, with the anterior ear preserved. Blackall Well.
- Fig. 7. *Inoceramus pernoides*, Etheridge. Mount Cornish Homestead.
- Fig. 8. Do. With coarse concentric rugæ. Upper Flinders River.
- Fig. 9. *Inoceramus Carsoni*, McCoy. $\frac{2}{3}$ nat. Upper Flinders River.
- Fig. 10. Do. Upper Flinders River.
- Fig. 11. *Mytilus inflatus*, Moore. Right valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 13, f. 4). Wollumbilla. [W.B.C.]
- Fig. 12. *Inoceramus pernoides*, Etheridge. Left valve (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 22, f. 23). Marathon. [R.D.]

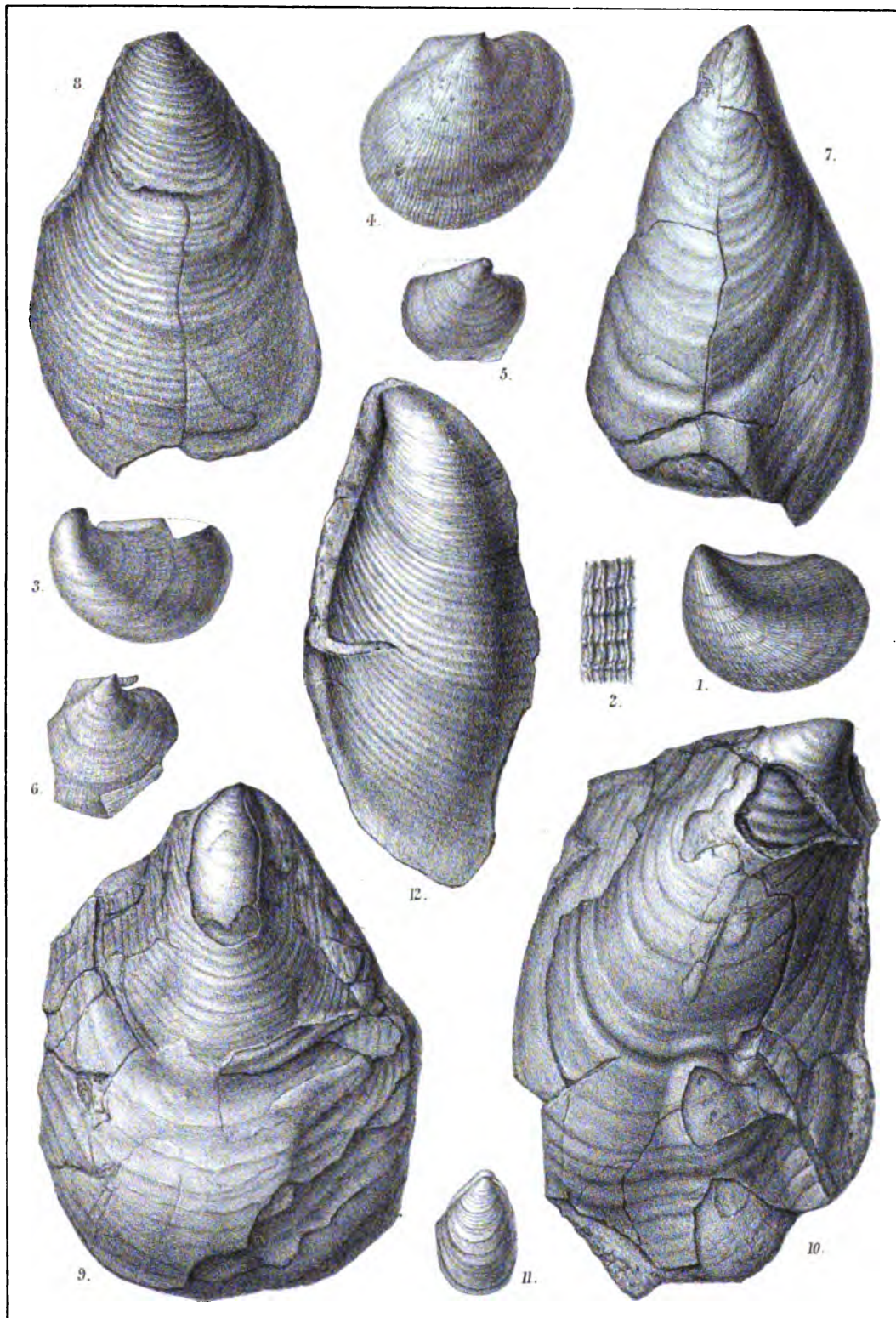


PLATE 26.

- Fig. 1. *Cucullæa robusta*, Etheridge. Artificial cast of the right valve, taken from an impression. Maryborough.
- Fig. 2. *Cucullæa Hendersoni*, Eth. fil. Internal cast, with hinge teeth exposed. Glanmire Block, near Tambo.
- Fig. 3. Do. Right valve partially preserved. Glanmire Block, near Tambo.
- Fig. 4. *Cucullæa robusta*, Etheridge. Internal cast of a small or young left valve. Maryborough.
- Fig. 5. *Trigonia*, sp. ind. Internal cast of a left valve. Maryborough.
- Fig. 6. *Nucula gigantea*, Etheridge. Internal cast of a right valve, with hinge teeth. Port Curtis.
- Fig. 7. Do. Another right valve. Maryborough.
- Fig. 8. *Nucula quadrata*, Etheridge. Internal cast of left valve. Aramac.
- Fig. 9. Do. View of hinge, showing casts of the deep anterior muscular impressions. Aramac.
- Fig. 10. *Nuculana (Yoldia ?) Randsi*, Eth. fil. Internal cast of right valve. Isis River.
- Fig. 11. *Cytherea ?* sp. ind. Much decorticated and ill-preserved left valve. Evora Station. Compare *Cytherea ? Hudlestoni* (t. 28, f. 12).
- Fig. 12. Do. View of hinge of the same.
- Fig. 13. *Undetermined Genus (? Unicardium)*. Left valve, with the test preserved. Upper Flinders River.
- Fig. 14. Do. Interior of the left valve of another individual. Upper Flinders River.
- Fig. 15. Do. View of the hinge of Fig. 13.
- Fig. 16. *Palæomæra*, sp. ind. A rather compressed and partially decorticated example. Muttaburra.
- Fig. 17. Do. A cast. Maryborough.
- Fig. 18. *Cyprina Olarkei*, Moore? Left valve of a poor cast. $\frac{1}{2}$ nat. Maryborough.
- Fig. 19. Do. View of hinge of the same specimen.
- Fig. 20. *Ceromya ?* sp. ind. Right valve of a poor cast, rather crushed. $\frac{1}{2}$ nat. Maryborough.

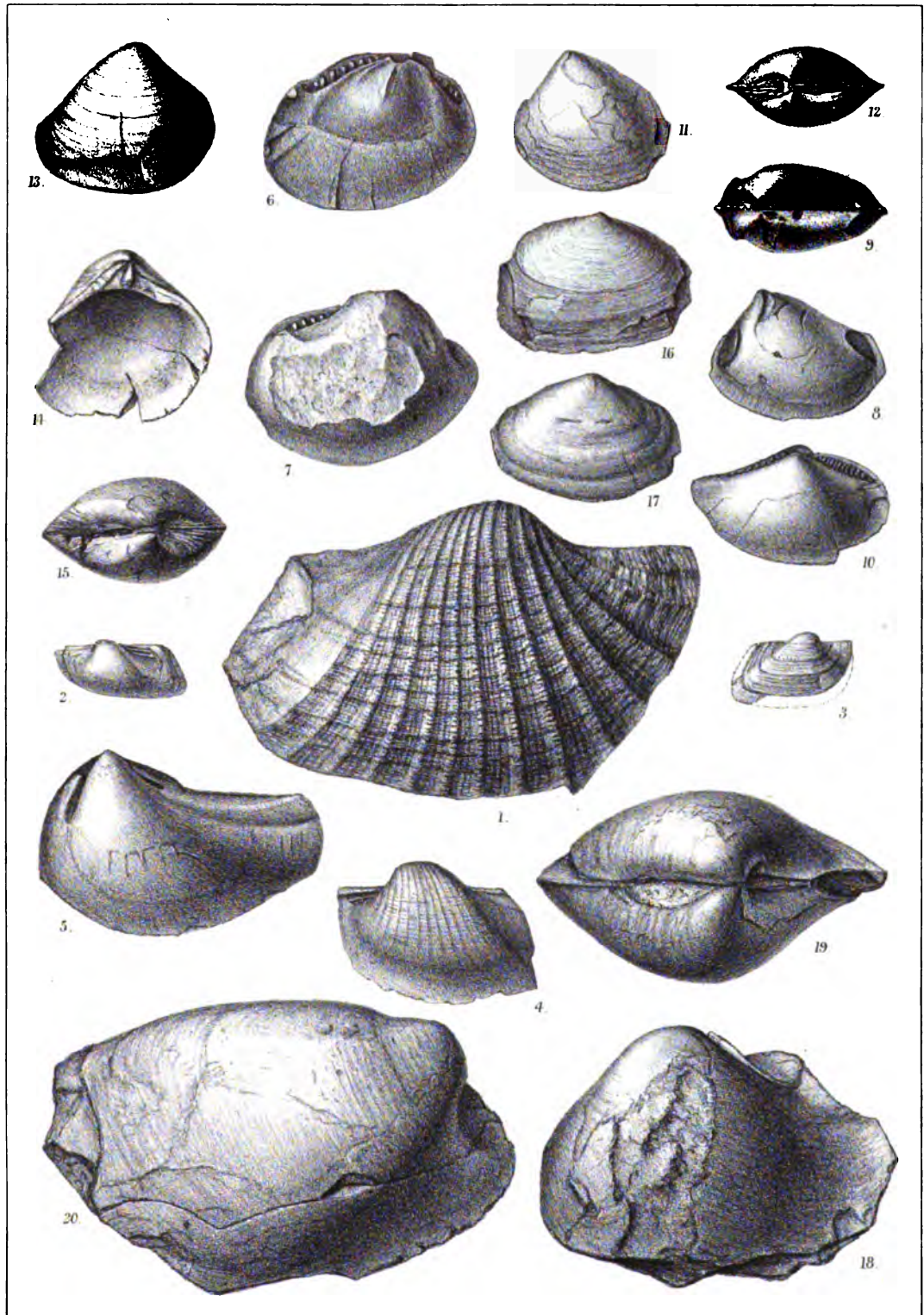


PLATE 27.

- Fig. 1. *Unicardium? Etheridgei*, Eth. fil. Maryborough. $\frac{1}{2}$ nat.
- Fig. 2. *Mactra Meeki*, Eth. fil. Left valve, with the test partially preserved. Walsh River.
- Fig. 3. Do. Hinge of another specimen. Walsh River.
- Fig. 4. *Corbicella? maranoana*, Eth. fil. An almost perfect left valve. Maranoa River.
- Fig. 5. Do. Interior of hinge.
- Fig. 6. *Macrocallista plana*, Moore, sp. Internal cast of right valve. Walsh River.
- Fig. 7. Do. Hinge. Walsh River.
- Fig. 8. Do. Internal cast of the left valve of a rather shorter variety. Minmi, near Roma.
- Fig. 9. *Cyprina Clarkei*, Moore. Internal cast of the left valve. $1\frac{1}{2}$ nat. Walsh River.
- Fig. 10. *Cyprina Clarkei*, Moore? Internal cast of the right valve, with pallial impression and sinus. Walsh River.
- Fig. 11. Do. Internal cast of another example. $\frac{1}{2}$ nat. Walsh River.
- Fig. 12. *Cytherea Woodwardiana*, Hudleston. Right valve, with test partially preserved (after Hudleston, *Geol. Mag.*, 1884, i., t. 11, f. 8a). [B.M.]
- Fig. 13. Do. View of anterior end of the same specimen (after Hudleston, *Geol. Mag.*, 1884, i., t. 11, f. 8b). [B.M.]
- Fig. 14. Do. Cast of the interior of another example, with the scars of the adductors, pallial line, and sinus visible (after Hudleston, *Geol. Mag.*, 1884, i., t. 11, f. 8c). [B.M.]
- Fig. 15. *Astarte apicalis*, Moore. Right valve, with the test apparently preserved (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 13, f. 11). Western Australia. [W.B.C.]
- Fig. 16. *Astarte wollumbillensis*, Moore. Right (?) valve, very imperfect (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 12). Wollumbilla. [W.B.C.]
- Fig. 17. *Mactra trigonalis*, Moore. Right valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 14, f. 6). [W.B.C.]
- Fig. 18. *Glycimeris sulcata*, Etheridge, var. Cast of left valve. Maryborough.

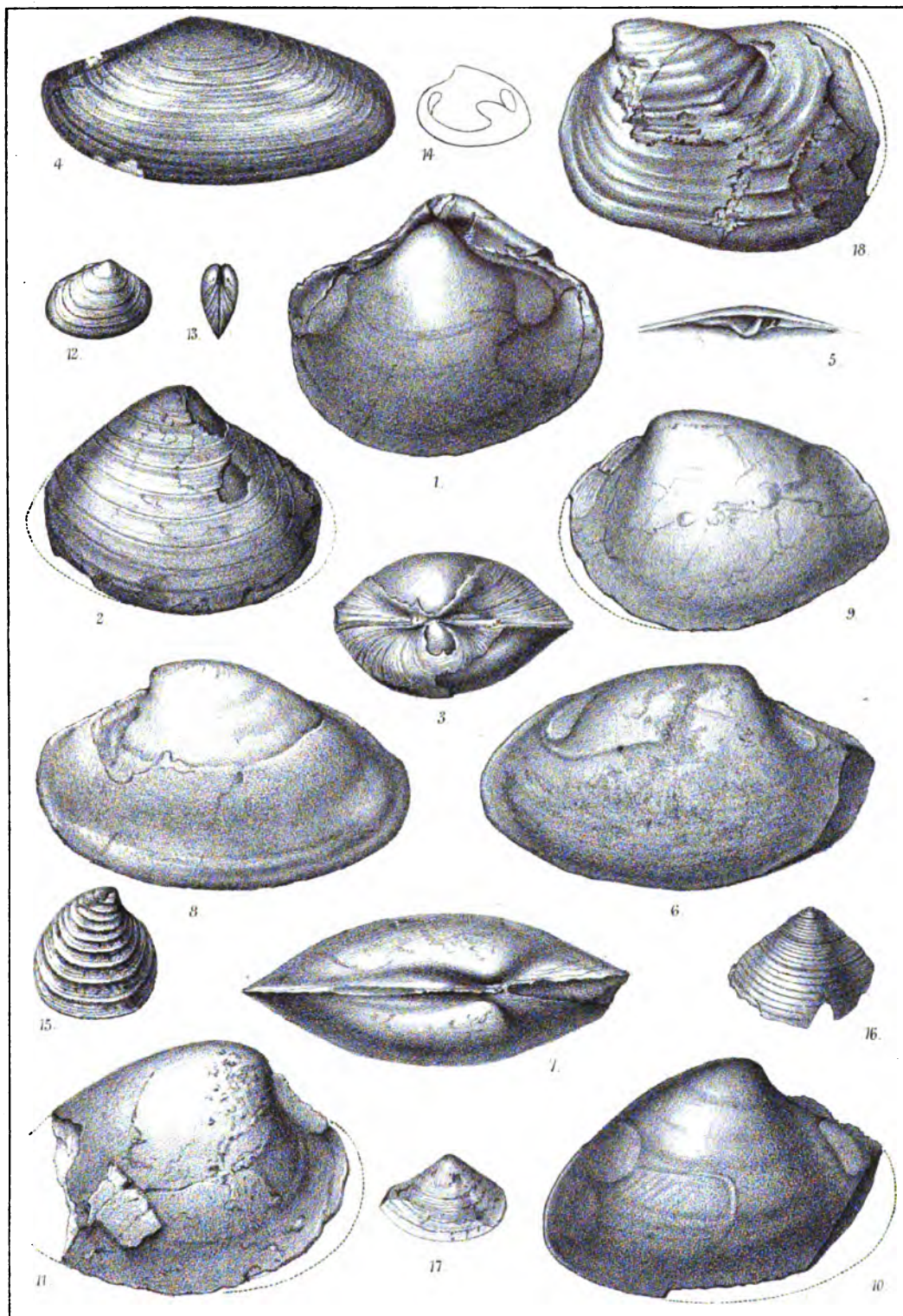


PLATE 28.

- Fig. 1. *Unio eyrensis*, Tate? Portion of the left valve, with the umbone decorticated. Bundanba.
- Fig. 2. *Corbicella? maranoana*, Eth. fil. Internal cast of the left valve. Near Mitchell Railway Station.
- Fig. 3. Do. Interior of hinge of the same.
- Fig. 4. *Glycimeris rugosa*, Moore, sp. Portion of left valve, a cast. Maranoa River.
- Fig. 5. Do. Hinge and united valves of same specimen.
- Fig. 6. *Glycimeris*, sp. ind. Right valve, probably of a separate species. Minmi, near Roma.
- Fig. 7. *Glycimeris aramacensis*, Eth. fil. Greater portion of left valve. Aramac.
- Fig. 8. Do. Hinge and united valves of the same.
- Fig. 9. *Goniomya depressa*, Moore. Portion of a right (?) valve (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 13, f. 6). Wollumbilla. [W.B.C.]
- Fig. 10. *Corimya Wilsoni*, Moore, sp. Nearly perfect left valve. (The specimen badly figured by Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 14, f. 8). Amby River. [P.S.B.]
- Fig. 11. *Corimya primula*, Hudleston? Left valve of a smaller and probably distinct species. Minmi, near Roma.
- Fig. 12. *Cytherea? Hudlestoni*, Eth. fil. Right valve, with the test partially preserved. Glanmire Block, near Tambo.
- Fig. 13. *Rocellaria terra-reginæ*, Eth. fil. A group. $\times 1\frac{1}{2}$. Burrum Coal Field.
- Fig. 14. Do. A single individual. $\times 1\frac{1}{2}$.

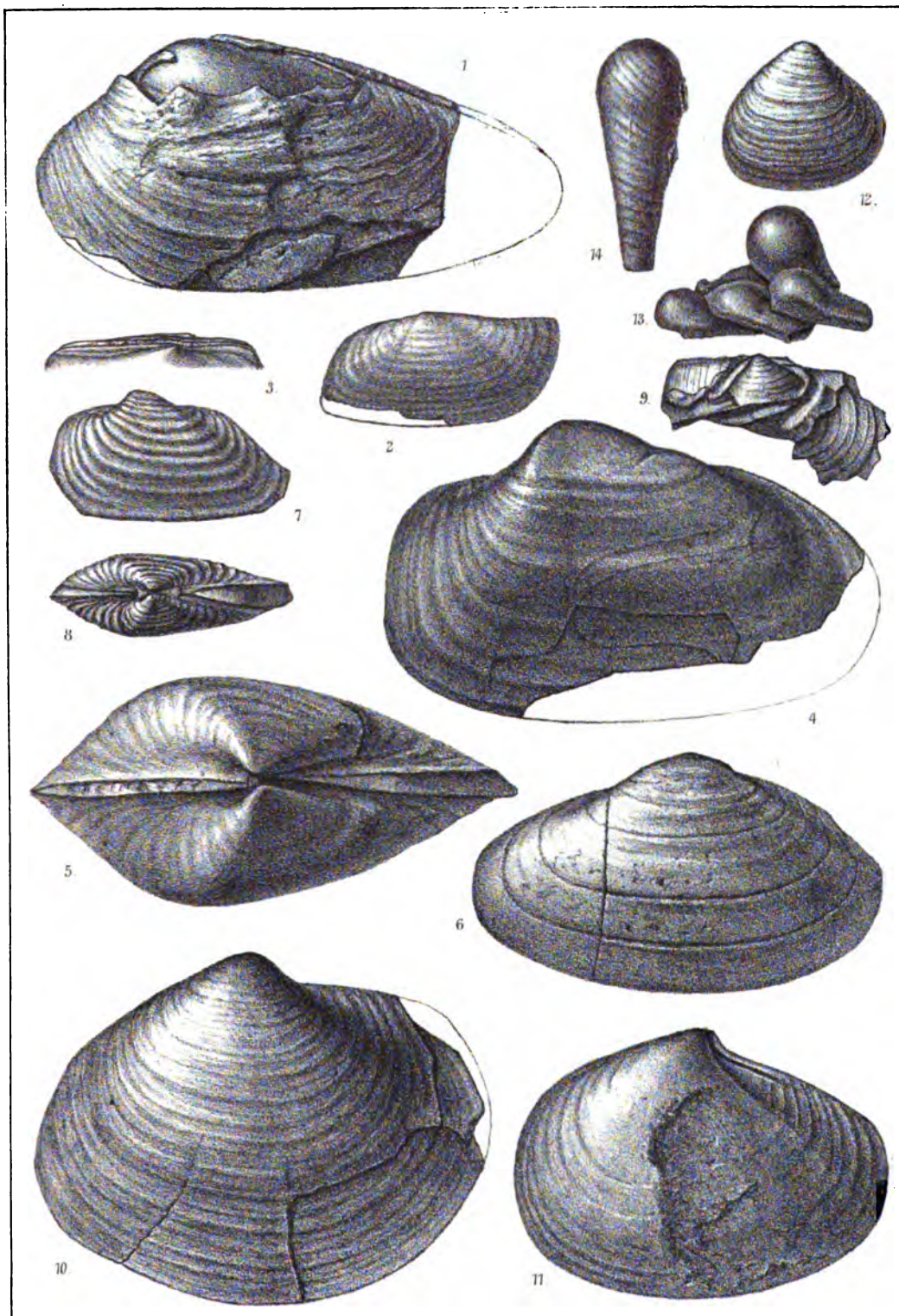
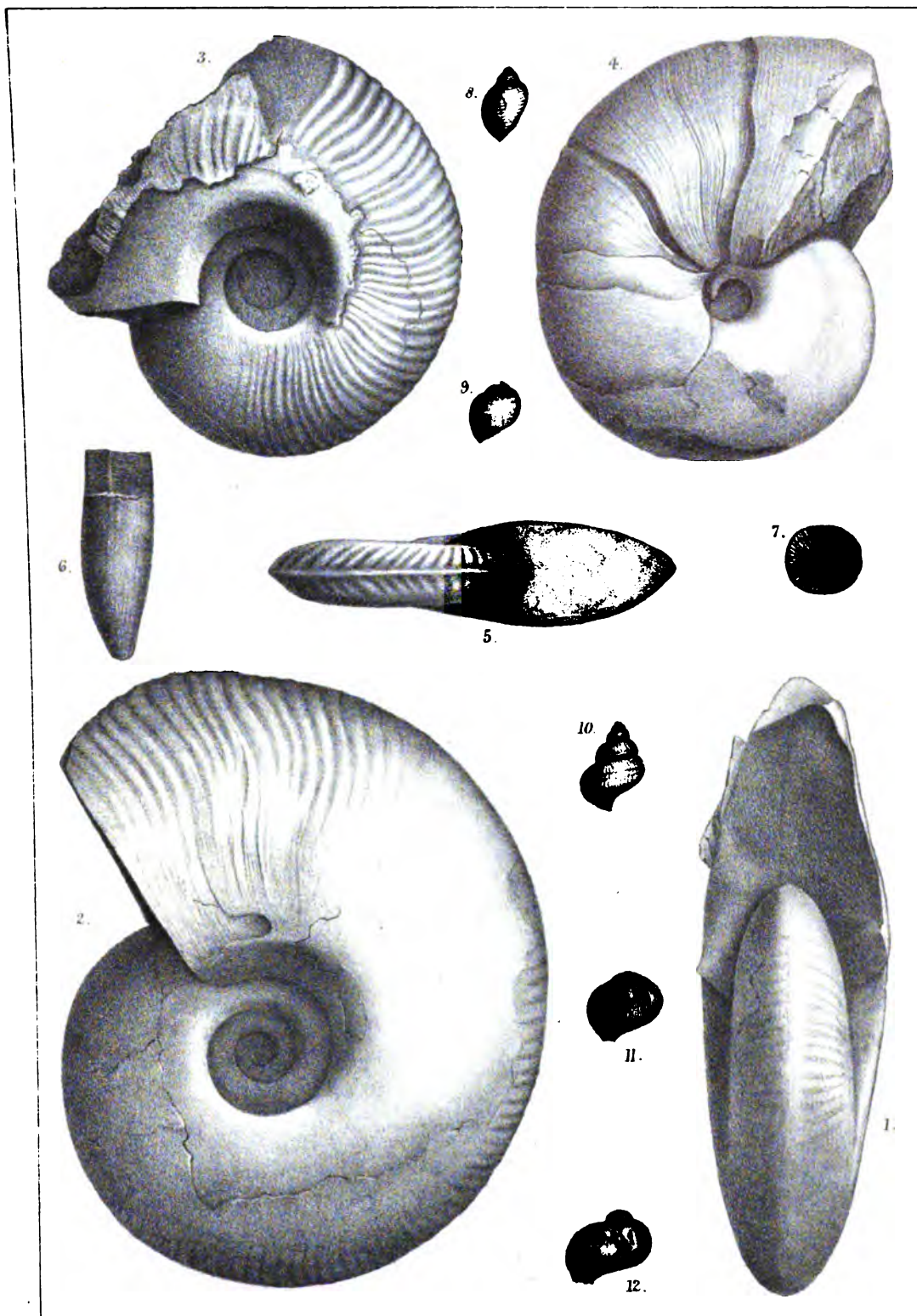


PLATE 29.

- Fig. 1. *Ammonites Daintreei*, Etheridge. View of the aperture, &c. (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii, t. 24, f. 1, *bis*). $\frac{2}{3}$ nat. Hughenden. [R.D.]
- Fig. 2. Do. Side view of the same (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii, t. 24, f. 1). $\frac{2}{3}$ nat. [R.D.]
- Fig. 3. Do. Another specimen (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii, t. 24, f. 2). [R.D.]
- Fig. 4. *Ammonites Sutherlandi*, Etheridge. Side view (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii, t. 21, f. 4). Marathon. [R.D.]
- Fig. 5. *Ammonites olene*, Ten. Woods. View of the mouth, back, and keel (after Woods, *Journ. R. Soc. N.S. Wales*, 1882, xvi., t. 7, f. 2). Palmer River.
- Fig. 6. *Belemnites Canhami*, Tate? Apex of the guard. Aramac.
- Fig. 7. Do. Cross section of the same example.
- Fig. 8. *Cinulia Hochstetteri*, Moore (after Moore, *Quart. Journ. Geol. Soc.*, xxvi, t. 10, f. 19). "Rather enlarged." Wollumbilla. [W.B.C.]
- Fig. 9. *Actæon depressus*, Moore (after Moore, *Quart. Journ. Geol. Soc.*, xxvi, t. 10, f. 20). "Rather enlarged." Wollumbilla. [W.B.C.]
- Fig. 10. *Pleurotomaria Cliftoni*, Etheridge (after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii, t. 25, f. 4). Gordon Downs. [R.D.]
- Fig. 11. *Natica ornatissima*, Moore (after Moore, *Quart. Journ. Geol. Soc.*, xxvi, t. 10, f. 16). Wollumbilla. [W.B.C.]
- Fig. 12. *Delphinula reflecta*, Moore (after Moore, *Quart. Journ. Geol. Soc.*, xxvi, t. 10, f. 21). "Enlarged." Wollumbilla. [W.B.C.]



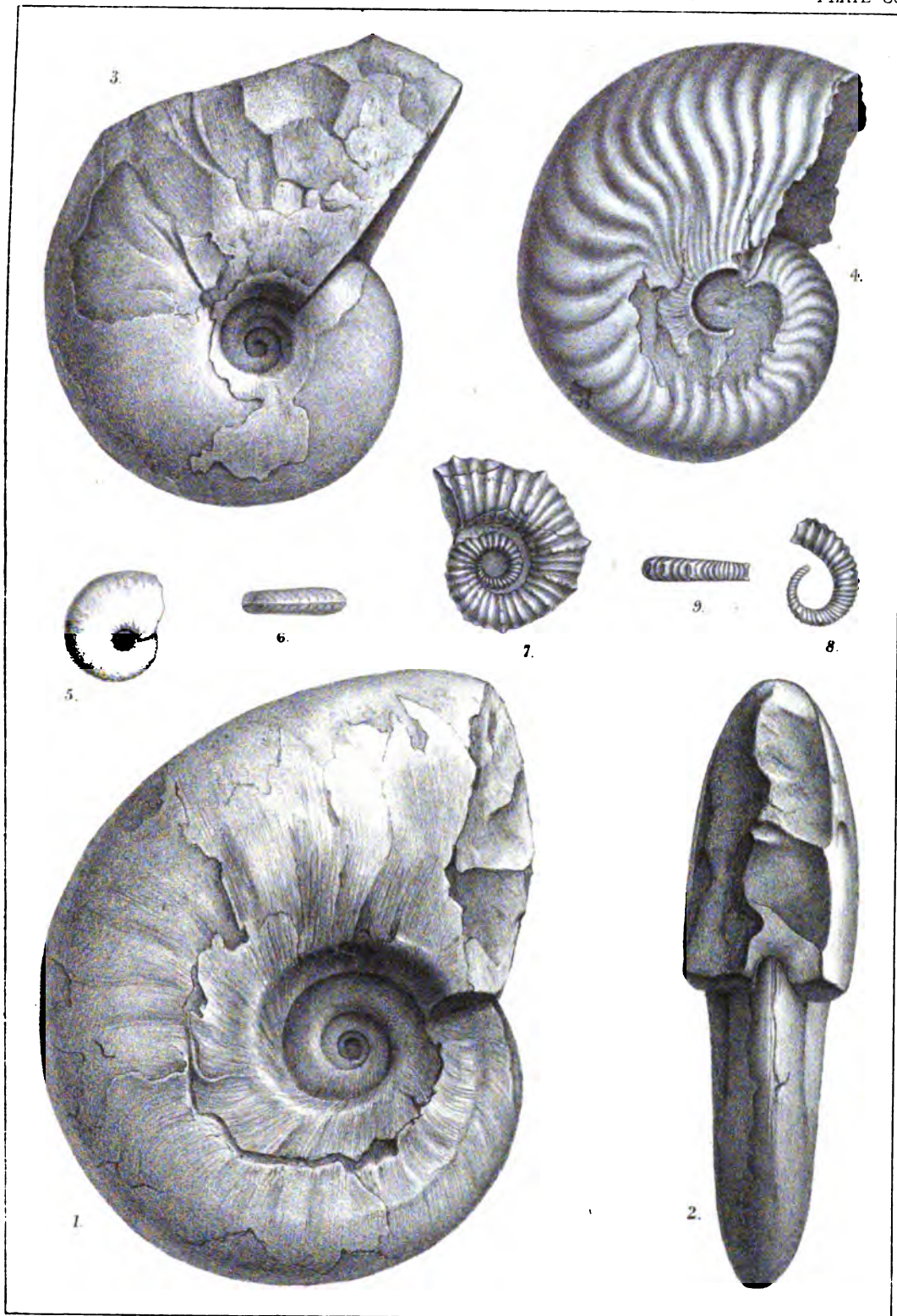
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Murphy Bros. imp.

CRETACEO-JURASSIC CEPHALOPODA & GASTROPODA.

PLATE 30.

- Fig. 1. *Ammonites Flindersi*, McCoy (*A. Beudanti*, var. *Mitchelli*, Etheridge, after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 23, f. 1. $\frac{3}{4}$ nat. Hughenden. [R.D.]
- Fig. 2. Do. (After Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 23, f. 1 *ibid.* $\frac{3}{4}$ nat. [R.D.]
- Fig. 3. Do. (After Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 23, f. 2). [R.D.]
- Fig. 4. *Ammonites olene*, Ten. Woods. (After Woods, *Journ. R. Soc. N.S. Wales*, 1882, xvi., t. 8, f. 1.)
- Fig. 5. *Ammonites*, sp. ind. (or young form of *A. Flindersi*, McCoy?) $\times 2$. Aramac.
- Fig. 6. Do. Back, with keel.
- Fig. 7. *Crioceras australe*, Moore. The inner whorls (really the oldest) with tubercles. Walsh River.
- Fig. 8. *Crioceras Edkinsi*, Eth. fil. Mount Cornish Station.
- Fig. 9. Do. Back of the same specimen.



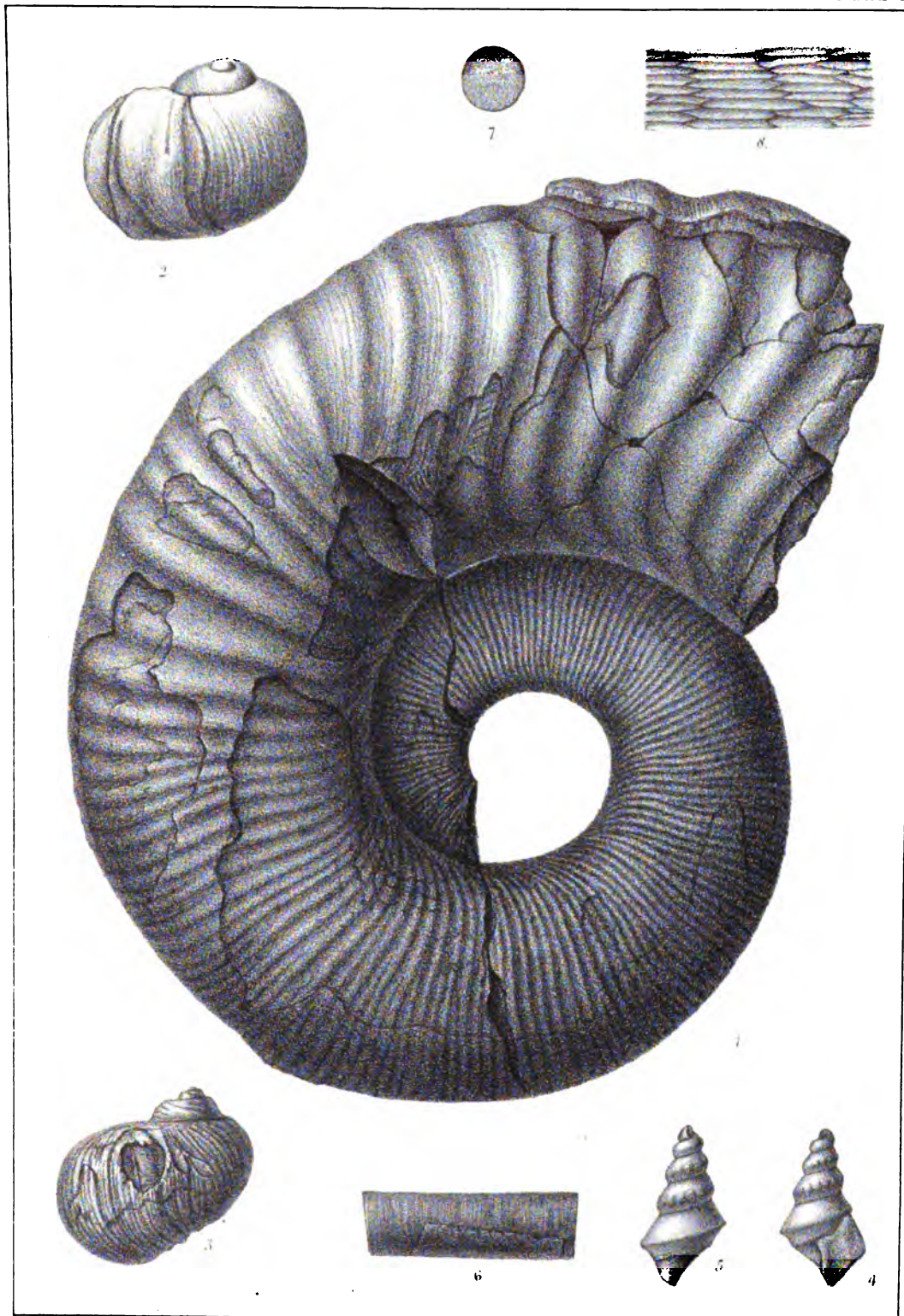
Bergeau & Highley del et lith.

Mintern Bros imp.

CRETACEO-JURASSIC CEPHALOPODA.

PLATE 31.

- Fig. 1. *Orioceras australe*, Moore. The largest specimen but three known to the Author. Walsh River.
- Fig. 2. *Natica variabilis*, Moore (*N. lineata*, after Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 21, f. 1). Maryborough. [R.D.]
- Fig. 3. Do. (After Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 10, f. 15.) Wollumbilla. [W.B.C.]
- Fig. 4. *Anchura ? Wilkinsoni*, Eth. fil. Front view. Evora Station.
- Fig. 5. Do. The same specimen, back view.
- Fig. 6. *Gastrochæna australis*, Eth. fil. Fragment of the tube. Maranoa River.
- Fig. 7. Do. Cross section of Fig. 6.
- Fig. 8. Do. Surface of the tube much enlarged, showing anastomosing lines, caused by the wearing down of the shelly-frills.



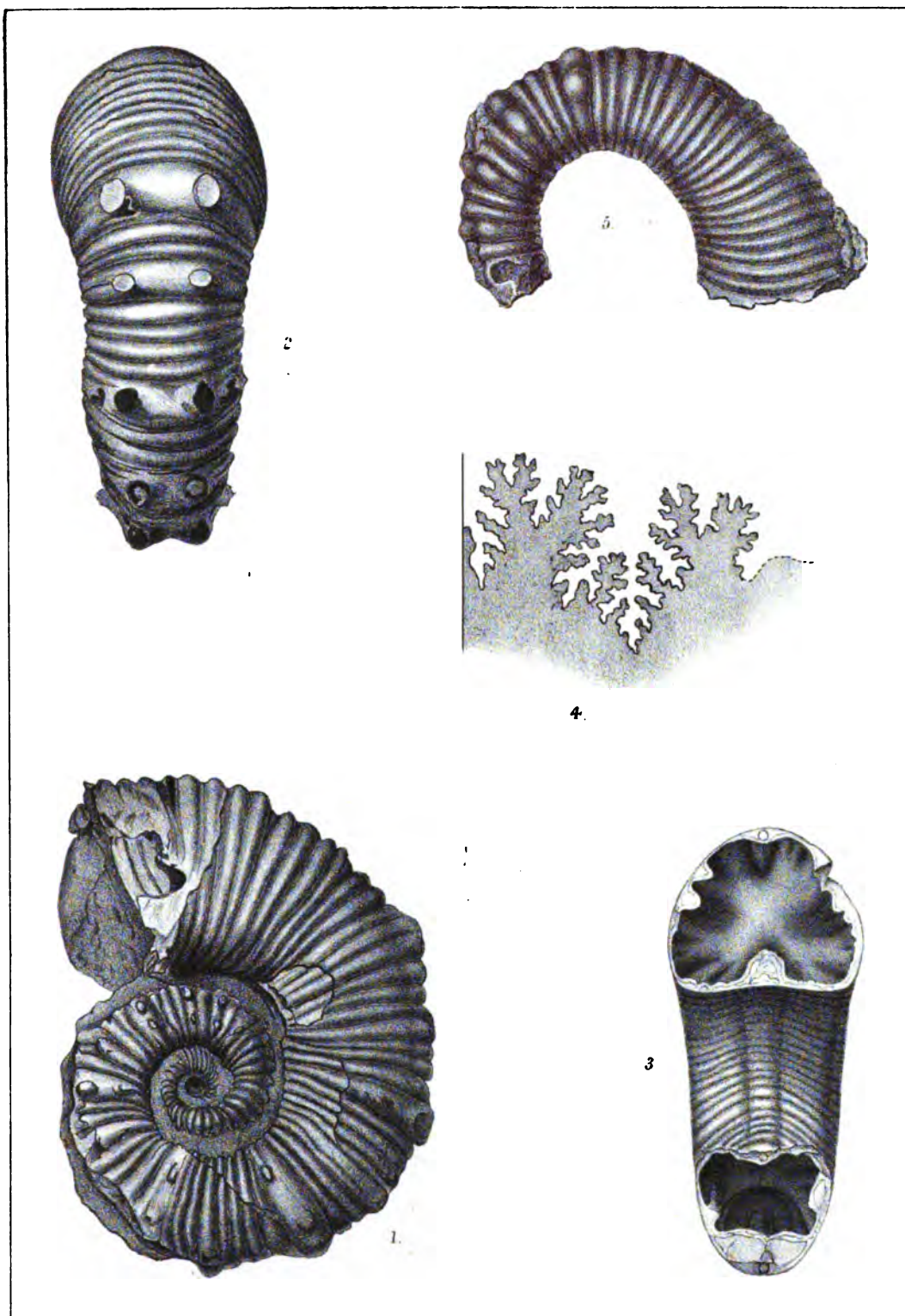
Berjeau & Highley del et lith

Mintern Bros. imp.

CRETACEO-JURASSIC CEPHALOPODA, GASTEROPODA & PELECYPODA.

PLATE 32.

- Fig. 1. *Crioceras australe*, Moore. Side view of the older whorls, with characteristic costation and tubercles. (This and the following figures are the types of *Crioceras Jackii*, Eth. fil.) Walsh River.
- Fig. 2. Do. Back of the same specimen, with the double row of tubercles. Walsh River.
- Fig. 3. Do. Front view of a portion of another example, showing the flattened dorsal side, ventral siphuncle, and the lobes and saddles of one of the septa. $\frac{1}{2}$ nat. Walsh River.
- Fig. 4. Do. Section of the lobes and saddles taken from a portion of Fig. 3.
- Fig. 5. Do. Fragment of a large individual, with a more open coil, and having the appearance of Woods' *C. irregulare*. Walsh River.

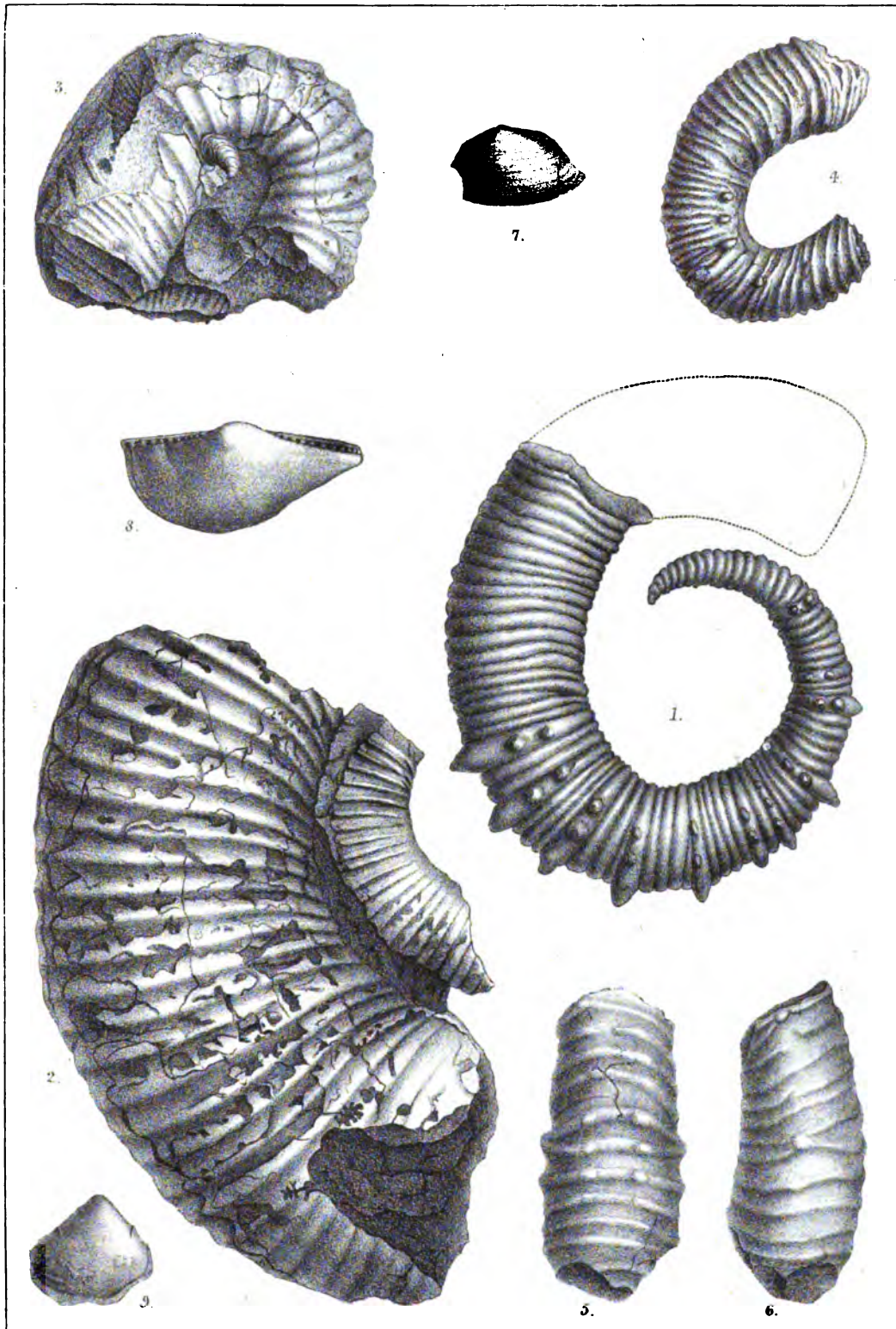


Berjeau & Hightley del. et. lit.

Mintern Bros. imp.

PLATE 33.

- Fig. 1. *Crioceras irregulare*, Ten. Woods (? = *C. australe*, Moore). An open and uncoiled form, with costæ and tubercles like those of *C. australe* (after Ten. Woods, *Journ. R. Soc. N. S. Wales*, 1882, xvi, t. 8, f. 2). Palmer River.
- Fig. 2. *Crioceras australe*, Moore. (After Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 15, f. 3). Upper Maranoa. [W.B.C.]
- Fig. 3. *Ancyloceras Flindersi*, McCoy. Portion representing one of the curved parts of the shell. $\frac{1}{2}$ nat. Landsborough Creek, accompanied by *Aucella hughendenensis*, Eth.
- Fig. 4. *Crioceras*, sp. ind. Portion of an individual, with the costæ in bundles of two and three springing from a row of tubercles on the inner edges of the whorls. Landsborough Creek.
- Fig. 5. *Crioceras*, sp. ind. A fragment with widely separated ribs and two rows of tubercles on the back. Aramac.
- Fig. 6. Do. Side view of the same fragment, the costæ united and interrupted in their course by a simple tubercle.
- Fig. 7. *Arca prælonga*, Moore. (After Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 14, f. 7.) [W.B.C.]
- Fig. 8. *Adrana? elongata*, Etheridge, sp. (After Etheridge, *Quart. Journ. Geol. Soc.*, xxviii., t. 20, f. 5.) Maryborough. [R.D.]
- Fig. 9. *Nucula truncata*, Moore. (After Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 9.) [W.B.C.]



Berjeau & Highley del. et lith.

Mintern Bros. imp.

PLATE 34.

- Fig. 1. *Ammonites (Schloenbachia) inflatus*, J. Sowerby? Lateral view of a well-preserved example. $\frac{1}{2}$ nat. Glanmire Block, near Tambo.
- Fig. 2. Do. Portion of the back, showing keel. $\frac{1}{2}$ nat.
- Fig. 3. Do. A septum, with lobes and saddles from Fig. 1.
- Fig. 4. Do.? Artificial cast from an impression differing but little from this species. Aramac.
- Fig. 5. *Ancyloceras Flindersi*, McCoy? Portion of a shell. $\frac{1}{2}$ nat. Aramac Well.
- Fig. 6. Do. View of the back or ventral aspect of the same specimen. $\frac{1}{2}$ nat.
- Fig. 7. Do. Septum seen in section and outline of the whorl. $\frac{1}{2}$ nat.
- Fig. 8. Do. Septum, with lobes and saddles. $\frac{1}{2}$ nat.
- Fig. 9. *Corbicula burrumensis*, Eth. fil. Right valve. Burrum Coal Field.
- Fig. 10. Do. Hinge and united valves of the same specimen.
- Fig. 11. *Nucula Cooperi*, Moore. (After Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 12, f. 8.) Wollumbilla. [W.B.C.]
- Fig. 12. *Cytherea (Cyprina?) Moorei*, Eth. fil. Left valve. Mount Hamilton, South Australia.
- Fig. 13. Do. Anterior view of the united valves.

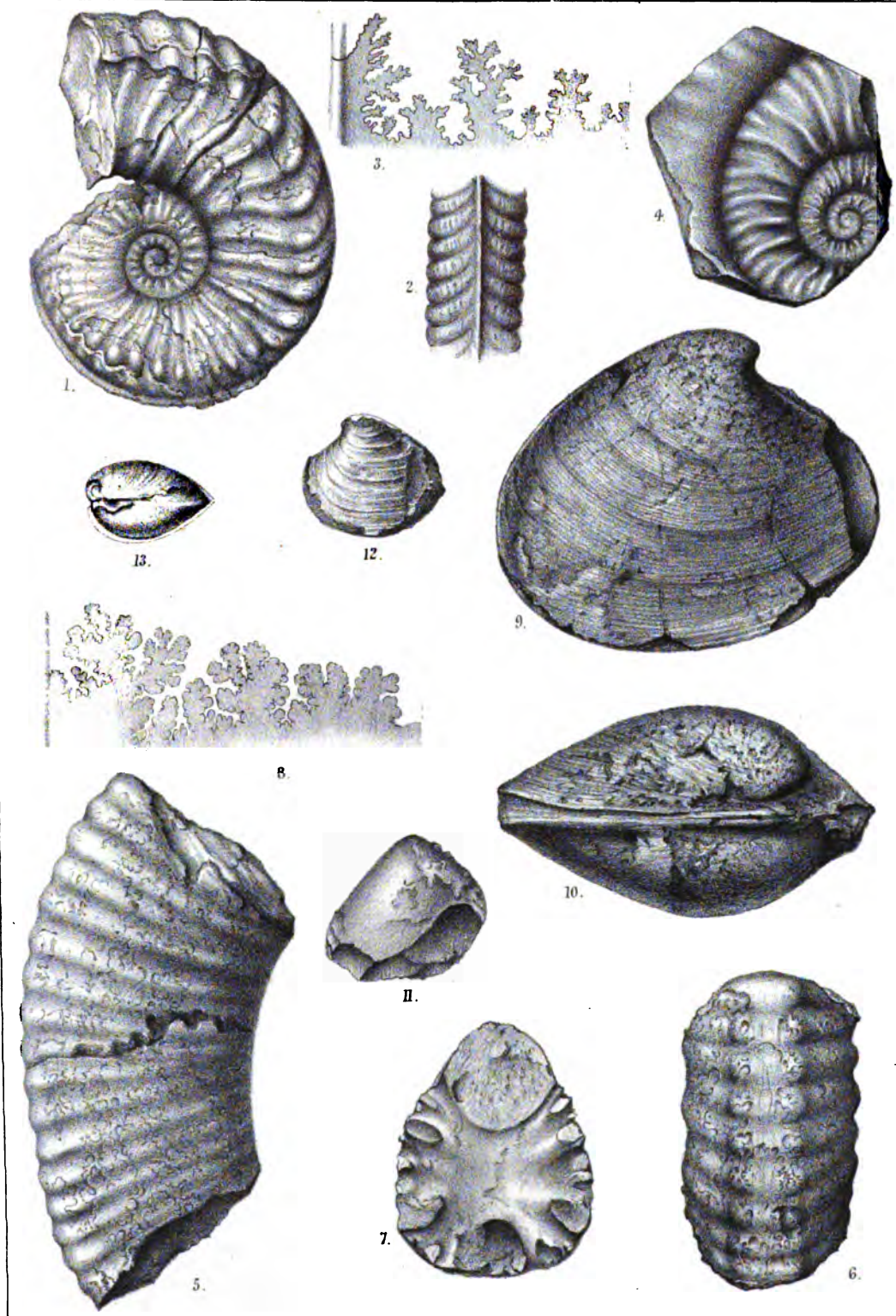
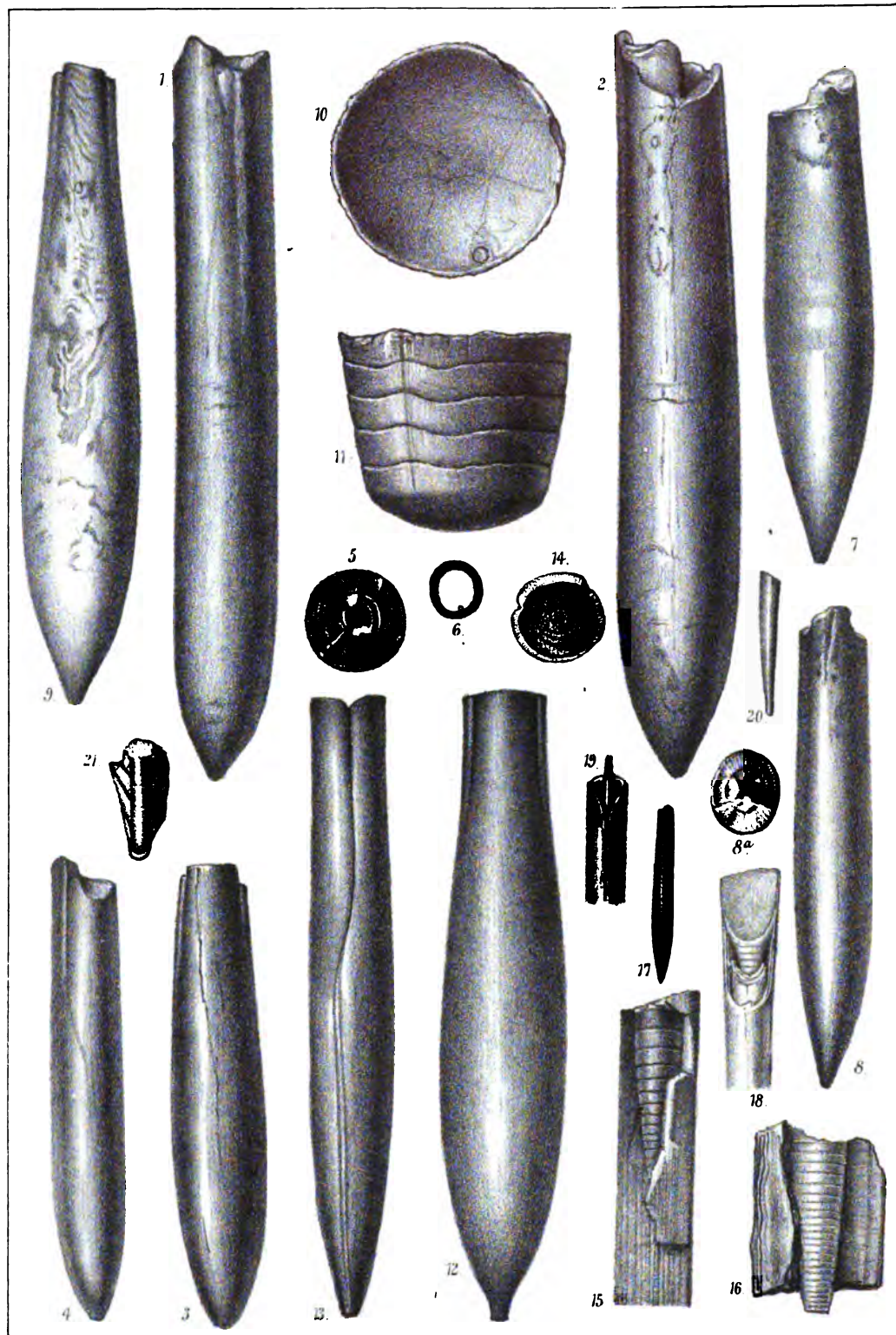


PLATE 35.

- Fig. 1. *Belemnites australis*, Phillips. Internal view of the guard (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 1). Wollumbilla. [W.B.C.]
- Fig. 2. Do. Ventral aspect of the guard, with the two lateral grooves visible at the proximal end (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 2). Wollumbilla. [W.B.C.]
- Fig. 3. *Belemnites Canhami*, Tate. Ventral aspect, with the lateral grooves visible at the proximal end (*B. australis*, after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 3). Ward Creek. [W.B.C.]
- Fig. 4. Do. Lateral view of same specimen, with one of the curved lateral grooves (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 4). [W.B.C.]
- Fig. 5. Do. Cross section of the guard behind the alveolar apex (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 5). [W.B.C.]
- Fig. 6. *Belemnites eremos*, Tate. Transverse section of the guard, showing alveolar chamber and siphuncle (*B. paxillosus*, after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 6a). Wollumbilla. [W.B.C.]
- Fig. 7. *Belemnites Canhami*, Tate? Dorsal view of a somewhat mucronate variety, fractured across the guard, at about the flexure of the lateral grooves. Cambridge Downs Run.
- Fig. 8. Do. Lateral view of the same specimen, showing the somewhat compressed form, the lateral grooving having become obliterated.
- Fig. 8a. Do. Cross section of the guard, almost circular, at the broken proximal end.
- Fig. 9. Do. Dorsal aspect of a form more approaching the type, with both furrows visible at the proximal end of the guard. Aramac Well.
- Fig. 10. *Belemnites Sellheimi*, Ten. Woods. Concave surface of the first of the five septa represented in Fig. 11, showing the position of the siphuncle. Flinders River, near Hughenden.
- Fig. 11. Do. Five chambers of the phragmacone, seen partially from the dorsal side.
- Fig. 12. *Belemnites Canhami*, Tate. Dorsal aspect with the lateral furrows visible (after Tate, *Trans. R. Soc. S. Austr.*, 1880, iii., t. 4, f. 2b). Peak Creek, Central Australia. [A.M.]
- Fig. 13. Do. Lateral view of the same, showing one of the lateral furrows with its flexure and bifurcation (after Tate, *Trans. R. Soc. S. Austr.*, 1880, iii., t. 4, f. 2a). [A.M.]
- Fig. 14. Do. Section of the alveolus, showing the unsymmetrical portion marked off by the lateral furrows, thin test on the ventral side, and the small siphuncle (after Tate, *Trans. R. Soc. S. Austr.*, 1880, iii., t. 4, f. 2c). [A.M.]
- Fig. 15. *Belemnites*, sp. ind. Phragmacone of about sixteen chambers in the alveolar cavity of the guard. Blackall Road.
- Fig. 16. Do. Another phragmacone in a similar position, but with closer and more numerous chambers. Blackall Road.
- Fig. 17. *Belemnites ? Liversidgei*, Eth. fil. Fusiform guard with the axis visible through the shelly matter as a thin white line. Aramac.
- Fig. 18. *Belemnites*, sp. ind. Portion of the guard with the phragmacone in the alveolar cavity, showing a fine grooved line, extending through the shelly layers. $\times 2$. Aramac.
- Fig. 19. *Belemnites Liversidgei*, Eth. fil. Portion of a guard traversed by canal. $\times 2$. Aramac.
- Fig. 20. Do. A guard with an extended mucro-like distal end. $\times 2$. Aramac.
- Fig. 21. *Teuthis ?* sp. ind. Portions of the shaft of a pen (after Moore, *Quart. Journ. Geol. Soc.*, xxvi., t. 16, f. 8). [W.B.C.]



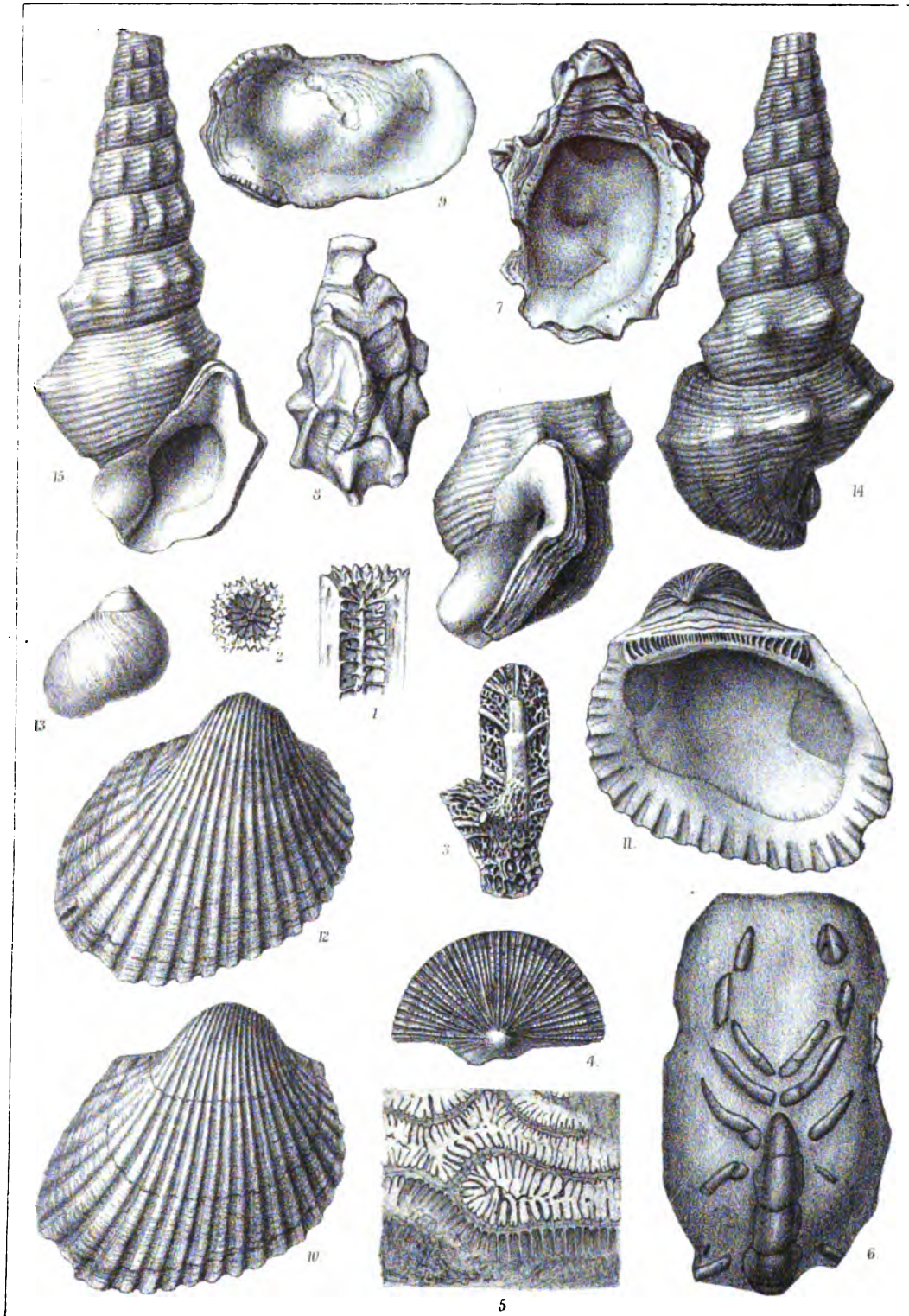
Berjeau & Higley del. et lith.

Minter Bros. imp.

CRETACEO-JURASSIC CEPHALOPODA.

PLATE 36.

- Fig. 1. *Alveopora*, sp. ind. Natural longitudinal section of part of a corallite, with the trabecular septa and spurious columella. $\times 3$. New Guinea.
- Fig. 2. Do. Horizontal view of a corallite. $\times 3$.
- Fig. 3. *Galaxea*, sp. ind. (near *G. clarus*). Natural section, showing corallites and peritheca. $\times \frac{1}{4}$. New Guinea.
- Fig. 4. *Deltocyathus*, sp. ind. Part of a corallum. $\times \frac{1}{4}$. New Guinea.
- Fig. 5. *Leptoria*, sp. ind. Portion of a corallum, seen horizontally. $\times \frac{1}{4}$. New Guinea.
- Fig. 6. *Thalassina Emerii*, Bell? Abdominal segments and anterior appendages, preserved in a nodule. Cleveland Bay.
- Fig. 7. *Ostrea pes-tigris*, Hanley. Upper valve, seen from the inside. Child's Vineyard.
- Fig. 8. Do. Another upper valve, seen from the exterior. Child's Vineyard.
- Fig. 9. Do. Lower or flat valve, from the inside.
- Fig. 10. *Anomalocardia trapezia*, Deshayes. Exterior view of a right valve. Child's Vineyard.
- Fig. 11. Do. Interior of a right valve. Child's Vineyard.
- Fig. 12. Do. Right valve of a more rotund variety. Child's Vineyard.
- Fig. 13. *Natica plumbea*, Lamarck. Child's Vineyard.
- Fig. 14. *Potamides ebininus*, Bruguière. Back view. Child's Vineyard.
- Fig. 15. Do. Front view. Child's Vineyard.
- Fig. 16. Do. Side view of the mouth, with a much thickened outer lip. Child's Vineyard.



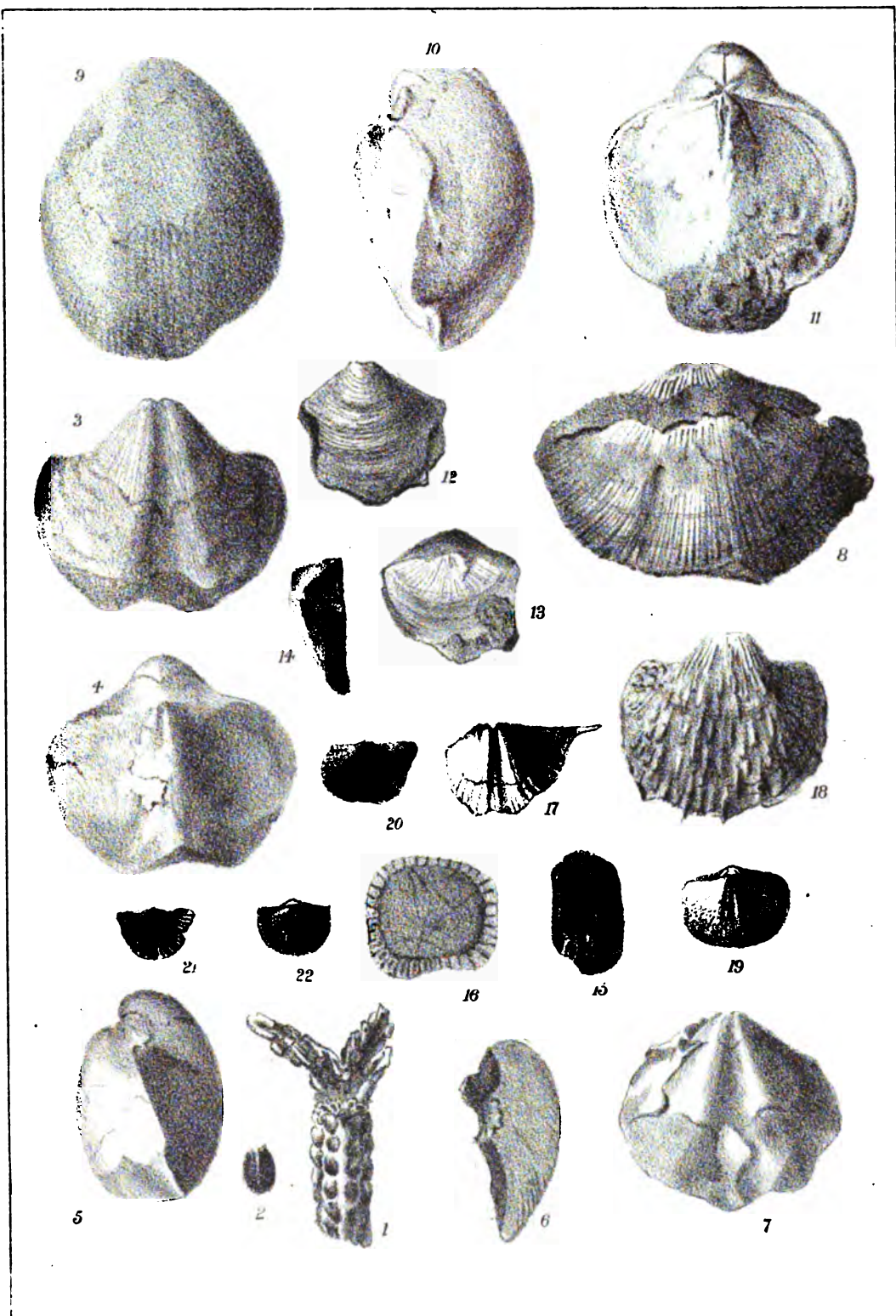
Barrett & Highley del. et lith.

Mintern Bros imp

TERTIARY CORALS & POST TERTIARY MOLLUSCA, &c.

PLATE 37.

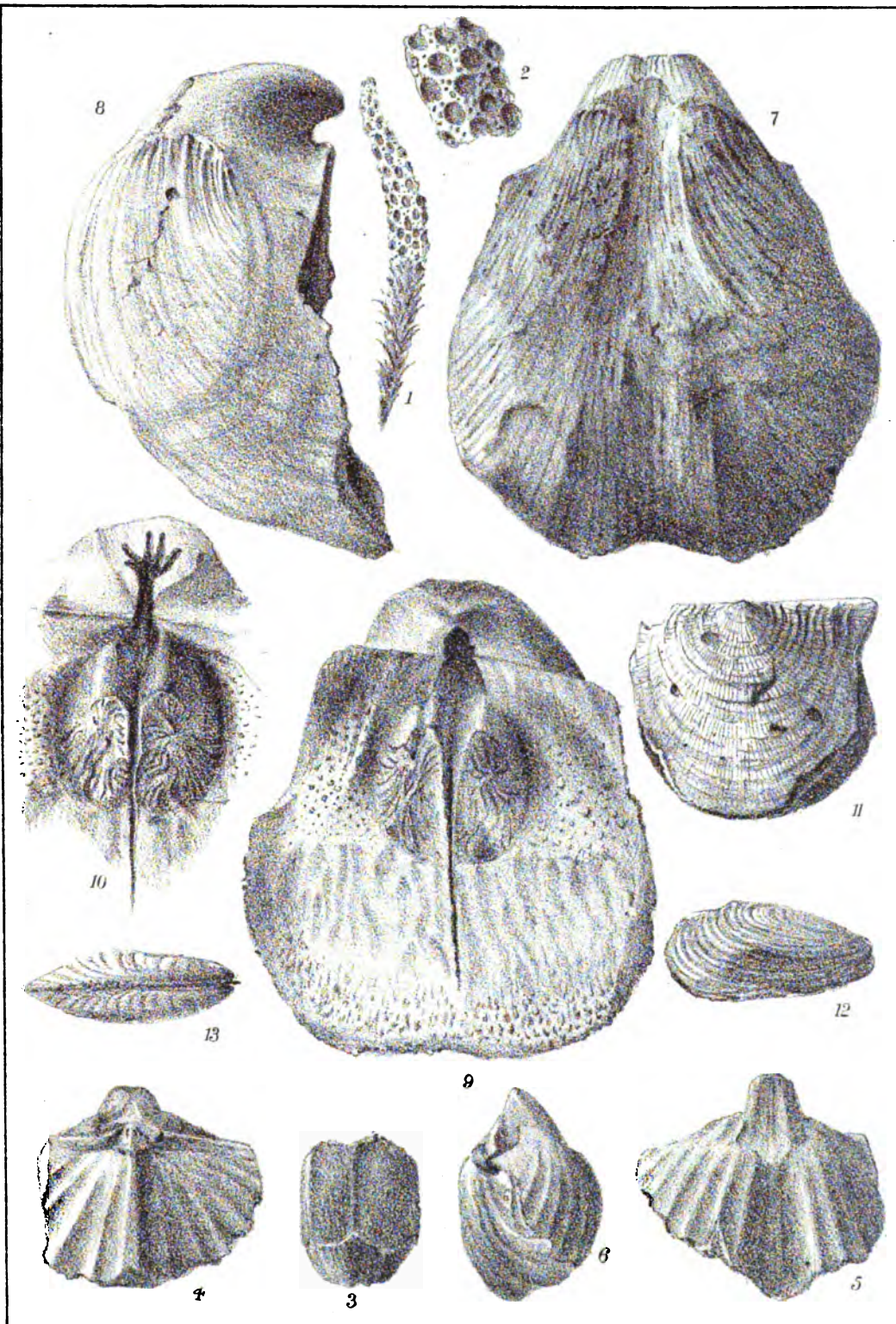
- Fig. 1. *Striatopora ? uniseptata*, Eth. fil. Portion of a bifurcating branch. $\times 2$
Fanning River.
- Fig. 2. Do. A calice, highly magnified, showing the single septum.
- Fig. 3. *Spirifera curvata*, Schlotheim. Ventral valve. Fanning Old Station.
- Fig. 4. Do. Dorsal valve, and umbo of the ventral. Fanning Old Station.
- Fig. 5. Do. Side view of the united valves.
- Fig. 6. *Pentamerus brevirostris*, Phillips. Section of the ventral valve, exposing the septum. Fanning Old Station.
- Fig. 7. *Spirifera curvata*, Schlotheim. Portion of a decorticated ventral valve. Fanning River.
- Fig. 8. *Atrypa desquamata*, Sby. A much worn and rather distorted ventral valve. Broken River.
- Fig. 9. *Pentamerus brevirostris*, Phillips. A variety, with indistinct costæ on the flattened and undefined fold. Fanning Old Station.
- Fig. 10. Do. Side view of united valves.
- Fig. 11. Do. Dorsal valve and umbo of the ventral of another specimen, showing a strongly-produced sulcus in front, slit of the septum on the ventral umbo, and those of the dividing lamellæ on the dorsal. Fanning Old Station.
- Fig. 12. *Orthotetes concentrica*, Eth. fil. Ventral valve, with a high umbo and concentric laminæ. Fanning Old Station.
- Fig. 13. Do. Dorsal valve of the same, with very fine radiating striae. Fanning Old Station.
- Fig. 14. Do. Side view of the united valves.
- Fig. 15. *Amplexus*, sp. ind. Side view of calice. Broken River.
- Fig. 16. Do. Horizontal section, with the marginal septa, and large central tabulate area. $\times 2$.
- Fig. 17. *Spirifera bicarinata*, Eth. fil. Ventral valve and one of the alar expansions $\times 1\frac{1}{2}$. Keelbottom.
- Fig. 18. *Productus*, sp. ind. (resembling *P. Humboldti*, D'Orb). Ventral valve with coarse elongated spines. Mount Britton Gold Field.
- Fig. 19. *Chonetes*, sp. ind. Internal cast of the dorsal valve. Mount Britton Gold Field.
- Fig. 20. *Chonetes*, sp. ind. Impression of a ventral valve, with deeply bifurcating costæ. $\times 1\frac{1}{2}$. Keelbottom River.
- Fig. 21. *Chonetes*, sp. ind. Impression of a rather deltoid form. $\times 2$. Keelbottom River.
- Fig. 22. *Chonetes*, sp. ind. $\times 2$. Keelbottom River.



DEVONIAN & CARBONIFEROUS CORALS
& MOLLUSCA.

PLATE 38.

- Fig. 1. *Monticulipora*, sp. ind. General feathery-like outline of the corallum. $\times 3$.
Kooingal.
- Fig. 2. Do. A small portion of the surface, highly enlarged, showing the calices
and acanthopores.
- Fig. 3. *Platycrinus ? nux*, Eth. fil. Internal cast of a part of the calyx. Mount
Britton Gold Field.
- Fig. 4. *Spirifera Stutchburii*, Eth. fil. Internal cast of the dorsal valve. Mount
Britton Gold Field.
- Fig. 5. Do. Ventral valve of the same specimen.
- Fig. 6. Do. Side view of the united valves.
- Fig. 7. *Productus subquadratus*, Morris. Internal cast of the ventral valve. Mount
Britton Gold Field.
- Fig. 8. Do. Side view of the same valve.
- Fig. 9. Internal cast of the dorsal valve, showing the impressions of the long
septum and muscular scars.
- Fig. 10. Do. Portion of another dorsal valve, with the impressions of the
septum and cardinal process extending far into the cavity,
the ventral umbo, also the muscular impressions. Mount
Britton Gold Field.
- Fig. 11. *Productus cora*, D'Orbigny. Impression of the exterior of the dorsal valve.
Mount Britton Gold Field.
- Fig. 12. *Modiomorpha mytiliformis*, Eth. fil. Decorticated right valve (probably the
young condition of Pl. 41, fig. 4). Mount Britton Gold Field.
- Fig. 13. Do. Hinge and united valves of the same specimen.

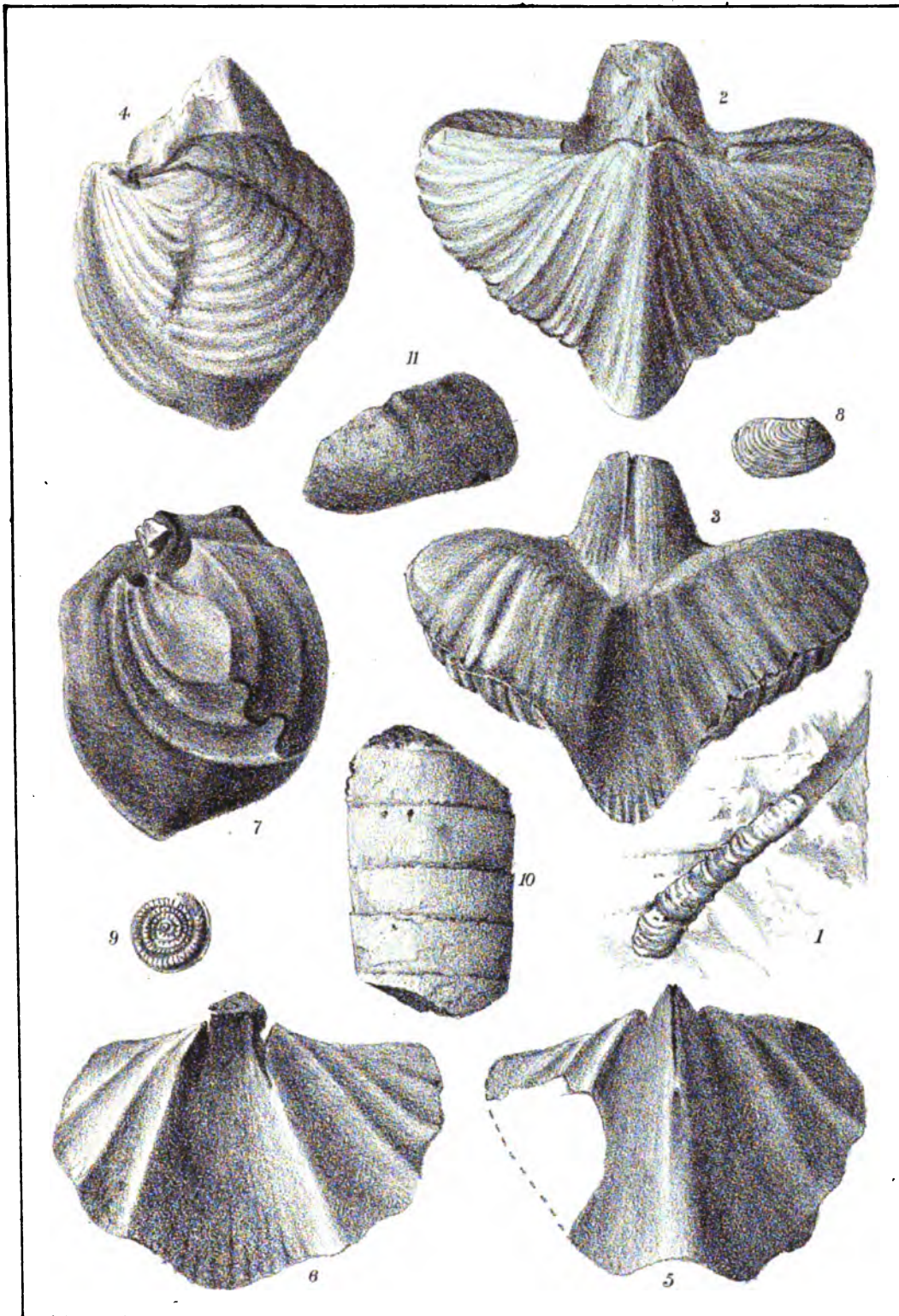


G.H. Barrow Del et Lith.

CARBONIFEROUS CORALS, BRACHIOPODA &c.

PLATE 39.

- Fig. 1. *Burrow*, with its infilling passing obliquely across the stratification. Rockhampton District (See Pl. 8, fig. 4, Pl. 44, figs. 15-8). [De V.]
- Fig. 2. *Spirifera Stokesii*, G. B. Sowerby. Internal cast of the dorsal valve. Mount Britton Gold Field.
- Fig. 3. Do. Internal cast of the ventral valve of the same specimen.
- Fig. 4. Do. Side view, showing the cast of the united valves.
- Fig. 5. *Martinia* (vel. *Martiniopsis*?) *Darwini*, Morris. Internal cast of the dorsal valve, taken from two specimens, to show the high sharp fold, grooved but undivided, and 2-3 costæ on each side. Mount Britton Gold Field.
- Fig. 6. Do. Internal cast of the ventral valve.
- Fig. 7. Do. Side view of the cast of the united valves of another example, to show the horizontal or depressed umbo of the ventral valve. Mount Britton Gold Field.
- Fig. 8. ^{*Undescribed Bivalve*} Do. Decorticated right valve. Rockhampton District.
- Fig. 9. *Nautilus ammonitiformis*, Eth. fil. The inner whorls (See Pl. 41, fig. 9). Rockhampton District. [De V.]
- Fig. 10. *Orthoceras*, sp. ind. Cast of five chambers. Mount Britton Gold Field.
- Fig. 11. *Deltodus* ? *australis*, Eth. fil. Rockhampton District. [De V.]

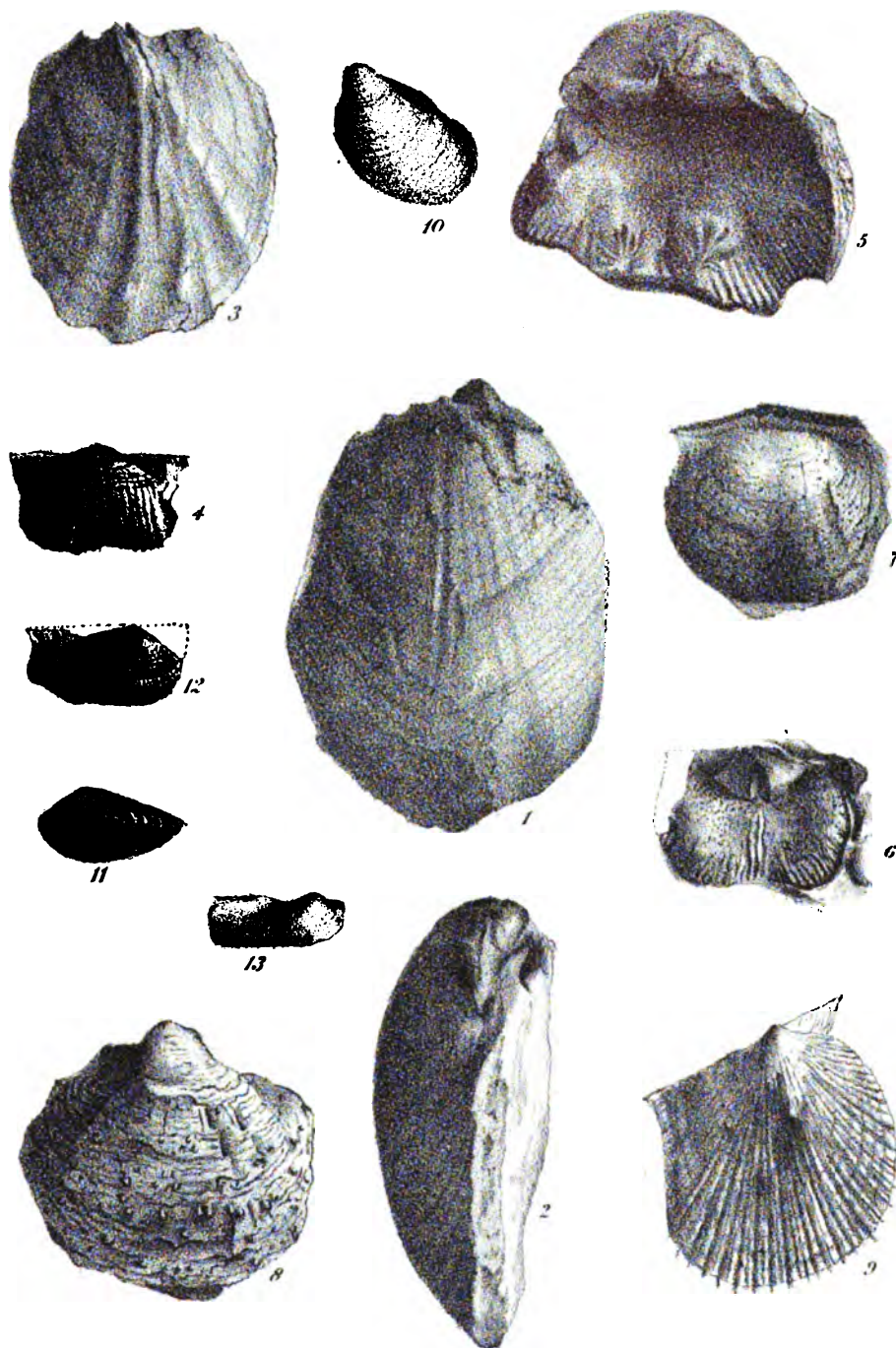


G. H. Barrow. Del. et Lth.

CARBONIFEROUS BRACHIOPODA, &c.

PLATE 40.

- Fig. 1. *Dielasma?* sp. ind. Internal cast of the dorsal valve of an imperfect specimen. Rockhampton District. [De V.]
- Fig. 2. Do. Internal cast of the greater portion of the united valves. [De V.]
- Fig. 3. *Spirifera* (allied to *S. oviformis*, McCoy). Internal cast of the dorsal (? valve. Rockhampton District. [De V.]
- Fig. 4. *Productus*, sp. ind. A decorticated example, with a concentrically lined visceral region and a coarsely costate front, somewhat resembling a *Strophomena*. Rockhampton District. [De V.]
- Fig. 5. *Productus subquadratus*, Morris. Hinge and interior of the ventral valve, showing a broad area, deltidial opening, and dendritic muscular scars. Yatton Gold Field.
- Fig. 6. *Strophomena analoga*, Phillips? Cast of the interior of the ventral valve, with the impressions of the muscular and vascular systems. Rockhampton District. [De V.]
- Fig. 7. *Strophalosia Gerardi*, King? Impression of the exterior of a small dorsal valve. Banana Creek. [De V.]
- Fig. 8. Do. A ventral valve, with the test preserved, strong concentric laminae, and blunt recumbent spines. Darr River. [A.L.]
- Fig. 9. *Pterinopecten Devisii*, Eth. fil. Right valve. Rockhampton District. [De V.]
- Fig. 10. *Nucula*, sp. ind. Internal cast of the left valve of a very deltoid species, possessing an abrupt anterior end, and a short posterior hinge. Rockhampton District. $\times 3$. [De V.]
- Fig. 11. *Mytilops?* *corrugata*, Eth. fil. Portion of a decorticated valve, with step-like concentric corrugations. $\times 3$. Rockhampton District. [De V.]
- Fig. 12. *Parallelodon costellata*, McCoy. Portion of a right valve, decorticated. Rockhampton District. [De V.]
- Fig. 13. Do. Internal cast of another right valve, with traces of transverse hinge teeth. Rockhampton District. [De V.]

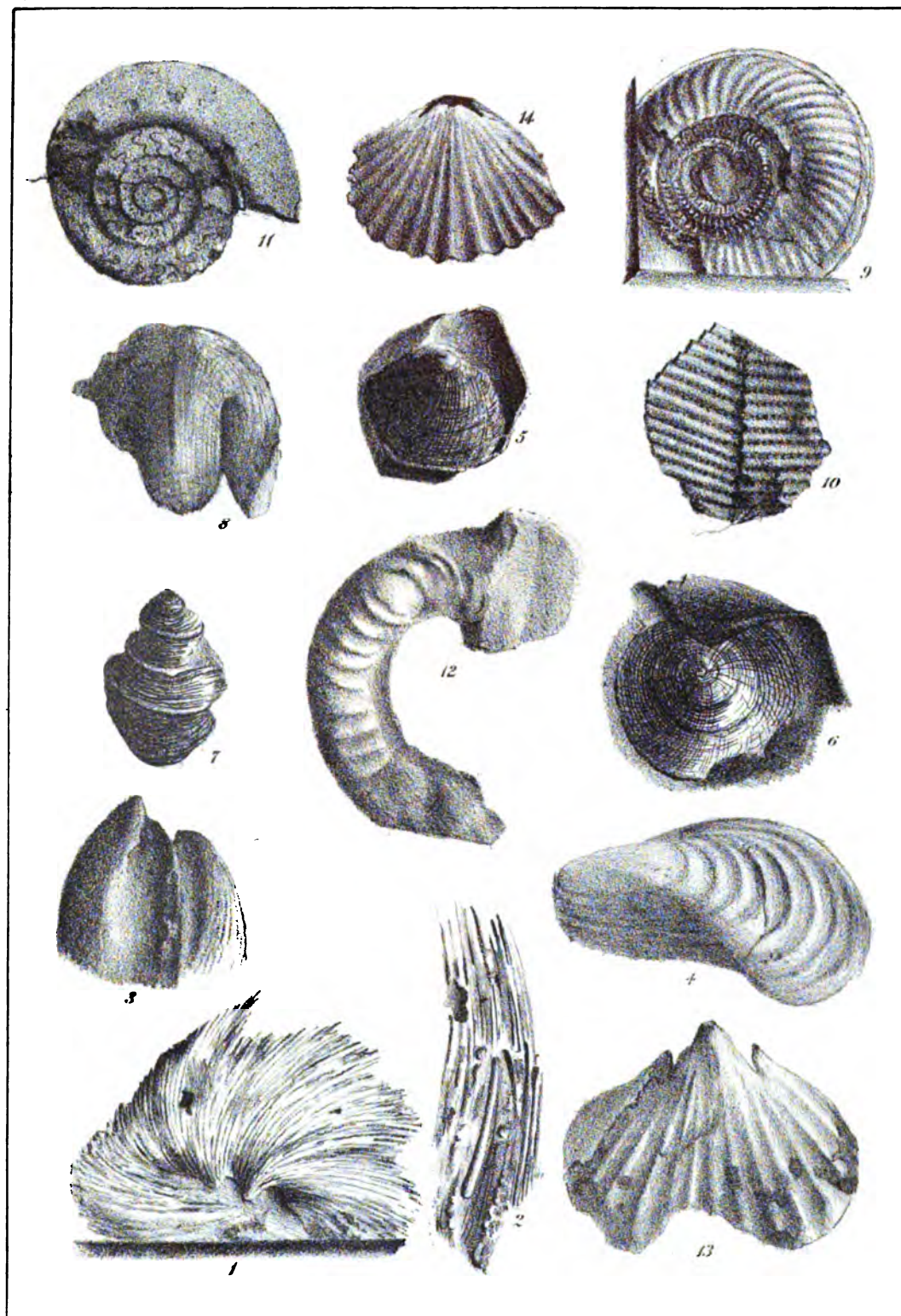


G. H. Barrow, Del. et Lith.

CARBONIFEROUS MOLLUSCA

PLATE 41.

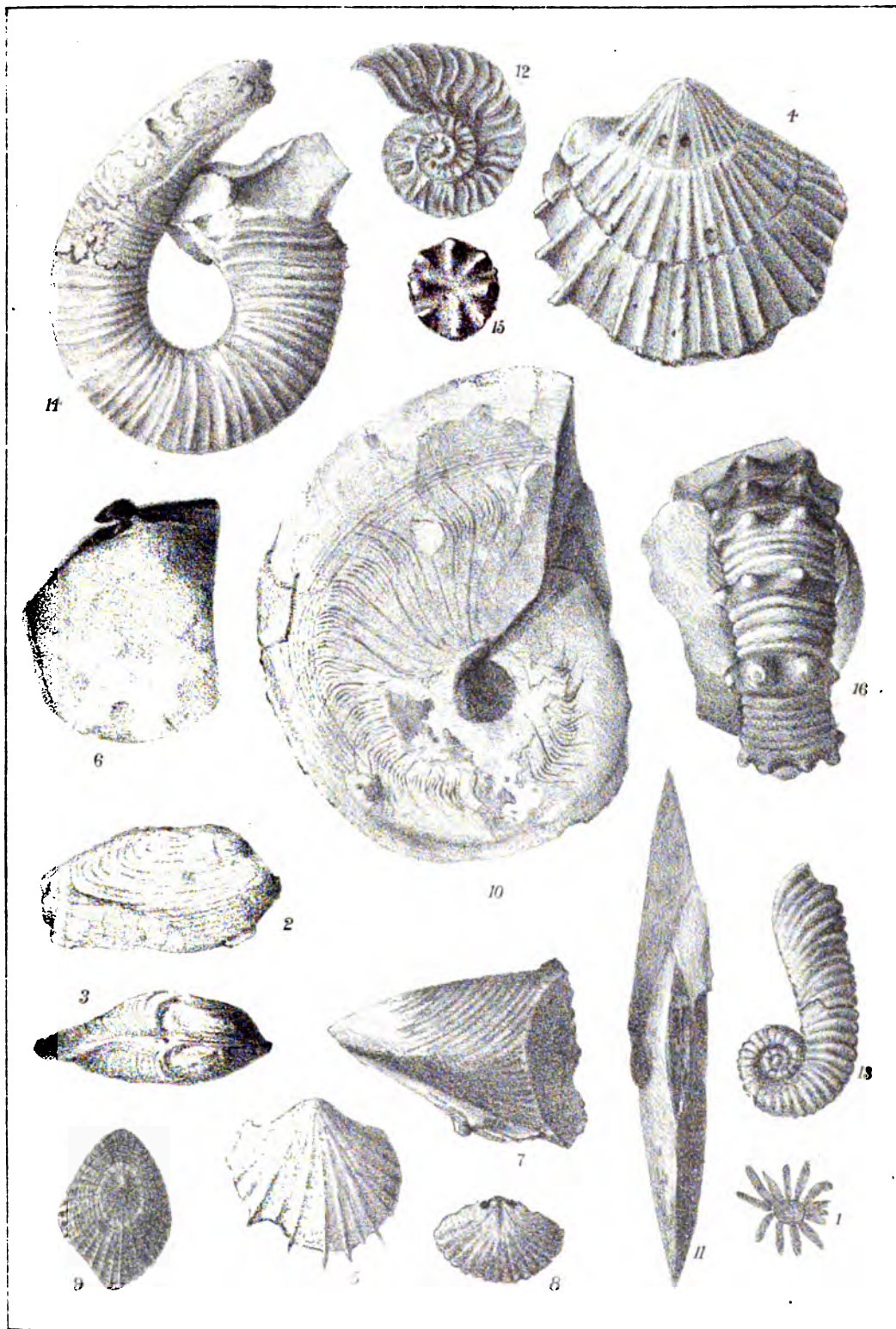
- Fig. 1. *Lasiocladia ? Hindei*, Eth. fil. An impression of the sponge. Rockhampton District. [De V.]
- Fig. 2. Do. Portion highly magnified, with impressions of rod-like spicules, and a few *in situ*.
- Fig. 3. *Deltopecten illawarrensis*, Morris, sp. Cast of the united valves, to show great inequality. Mount Britton Gold Field.
- Fig. 4. *Modiomorpha ? mytiliformis*, Eth. fil. Cast of the left valve. Banana Creek (See Pl. 14, fig. 5, and Pl. 38, figs. 12 and 13). [De V.]
- Fig. 5. *Mourlonia ? coniformis*, Eth. fil. Oblique apical view, with coarse reticulated ornament. Banana Creek. [De V.]
- Fig. 6. *Luciella ? Grayæ*, Eth. fil. Apical view taken from an artificial cast, showing reticular ornament (the nodes at the intersection of the concentric and radiating lines are not represented). $\times 2$. Rockhampton District. [De V.]
- Fig. 7. *Yvania Konincki*, Eth. fil. Side view of a partially preserved example. $\times 2$. Rockhampton District. [De V.]
- Fig. 8. *Bucania textilis*, De Koninck? Spiral and decussating striæ, both visible. Rockhampton District. [De V.]
- Fig. 9. *Nautilus ? ammonitiformis*, Eth. fil. More or less complete specimen, with the central small whorls (See Pl. 39, fig. 9), and the outer strongly costate whorl. Rockhampton District. [De V.]
- Fig. 10. *Conularia*, sp. ind. With transversely wrinkled sutures. Gympie.
- Fig. 11. *Goniatites planorbiformis*, Eth. fil. A decorticated example, with the septa visible. Lake's Creek. [De V.]
- Fig. 12. *Gyroceras ? dubius*, Eth. fil. A fragment seen from the side. Rockhampton District. [De V.]
- Fig. 13. *Rhynchonella croydonensis*, Eth. fil. An internal cast of the ventral valve. Croydon.
- Fig. 14. Do. Probably the dorsal valve of the same species. Croydon.



J. H. Barrer, D. Sc. et Lith.

PLATE 42.

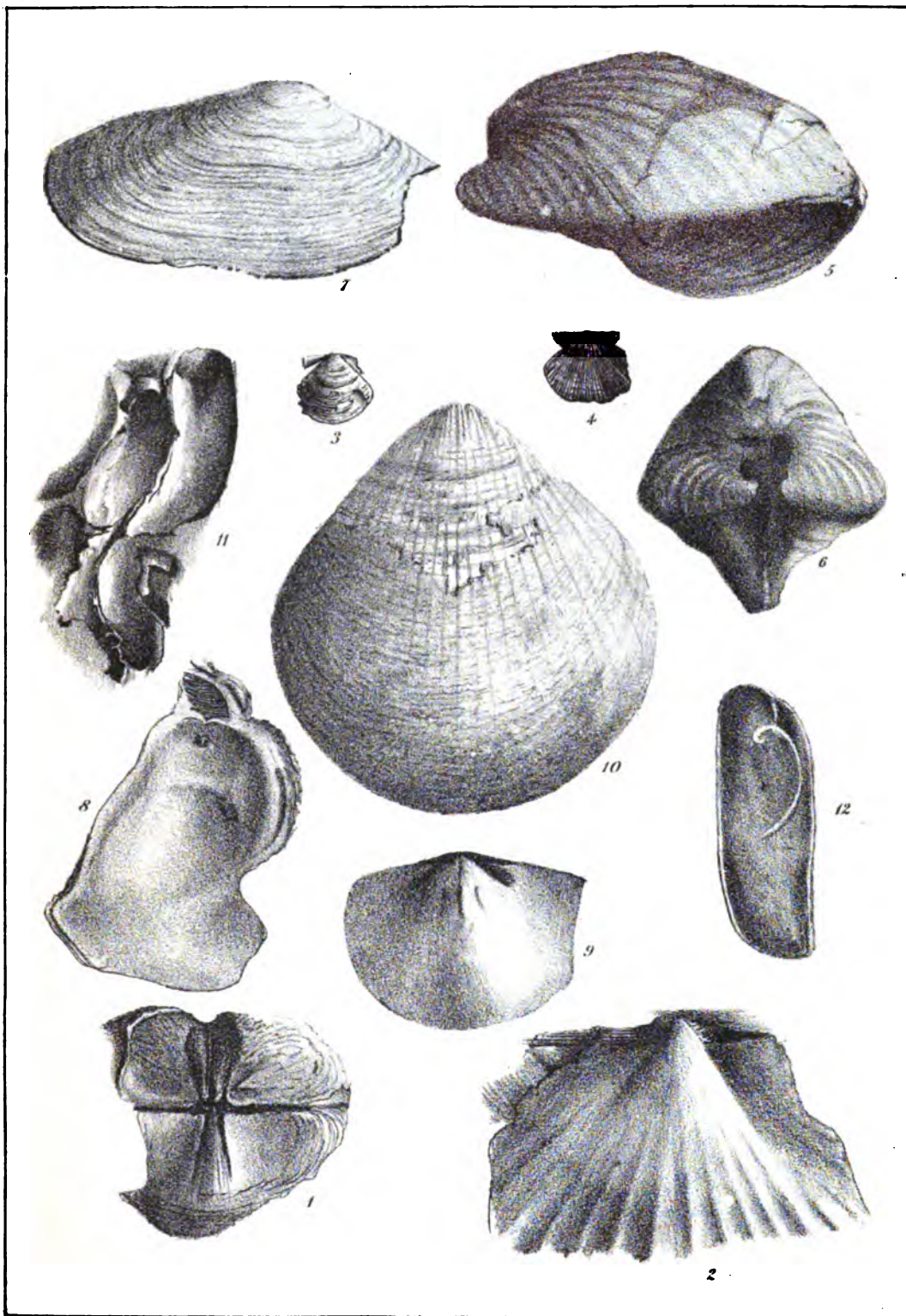
- Fig. 1. *Phyllothea*, sp. ind.? Whorl of lanceolate leaves. $\times 2$. Bundanba.
- Fig. 2. *Unio ipsviciensis*, Eth. fil. Right valve. Bremer Basin Colliery.
- Fig. 3. Do. Hinge and united valves of the same.
- Fig. 4. *Maccoyella Barklyi*, var. *mariaeburiensis*, Eth. fil. Artificial cast taken from an impression of the left valve. Croydon.
- Fig. 5. Do. Small left valve, with spinous terminations to the costæ. Croydon.
- Fig. 6. Do. An imperfect right valve with a well-marked lobate ear. Croydon.
- Fig. 7. *Inoceramus*, sp. ind. Anterior portion of the united valves. Bowen Downs.
— $3\frac{1}{2}$ nat. [Q.M.]
- Fig. 8. *Rhynchonella*, sp. ind. Impression of a small dorsal valve. Croydon.
- Fig. 9. *Siphonaria Samwelli*, Eth. fil. An artificial cast taken from an impression. Croydon.
- Fig. 10. *Ammonites walshensis*, Eth. fil. Walsh River. [Q.M.]
- Fig. 11. Do. Sectional view of the same specimen.
- Fig. 12. *Ammonites*, sp. (allied to *A. denarius*, Sby., or *A. lautus*, Park). An impression with geniculate costæ. Warriana Bore.
- Fig. 13. *Ancyloceras*? *Taylori*, Eth. fil. Head of the Walsh River. [Q.M.]
- Fig. 14. *Hamites* (or *Hamulina*?) *laqueus*, Eth. fil. Tower Hill. [Q.M.]
- Fig. 15. Do. Section showing a septum from the same specimen.
- Fig. 16. *Crioceras irregulare*, Ten. Woods. Walsh River. [Q.M.]



G.H. Barrow Del et Lith.

PLATE 43.

- Fig. 1. *Martinia* (vel. *Martiniopsis*?) *subradiata*, G. B. Sby., sp. Internal cast of the united valves, seen from above. Banana Creek. $\frac{1}{2}$ nat. [De V.]
- Fig. 2. *Deltopecten illawarrensis*, Morris sp. Cast of a portion of the left (?) valve, with the striated hinge area, and the triangular cartilage-pit below the umbo. Mount Britton Gold Field.
- Fig. 3. *Aviculopecten Laurenti*, Eth. fil. Right valve (reversed). Crow's Nest. [M.G.M.]
- Fig. 4. Do. Left valve (reversed). Rockhampton District. [De V.]
- Fig. 5. *Chænomya*? *carinata*, Eth. fil. Right valve, showing oblique outline, high umbone and strong diagonal ridge. (This and the next figure have been turned upside down inadvertently.) Banana Creek. [De V.]
- Fig. 6. Do. Hinge and united valves. Banana Creek.
- Fig. 7. *Sanguinolites concentricus*, Etheridge? Faint cast of the left valve (reversed). Gympie.
- Fig. 8. *Ostrea*, sp. ind. Artificial cast of an impression of the interior of the lower or attached valve. Croydon.
- Fig. 9. *Placuna*, sp. ind. Artificial cast of an impression of the interior of the left (?) valve. Croydon.
- Fig. 10. *Cardium Brazieri*, Eth. fil. Left (?) valve, with the test partially preserved under its radiating ribs. Loc. ? [J.E.T.W.]
- Fig. 11. *Teredo*, sp. ind. Two tubes split in half longitudinally, with the shelly matter partially preserved. Croydon.
- Fig. 12. *Teredo*, sp. ind. Tube infilled with matrix, and one valve, shifted from its natural position. ? Loc. [J.E.T.W.]



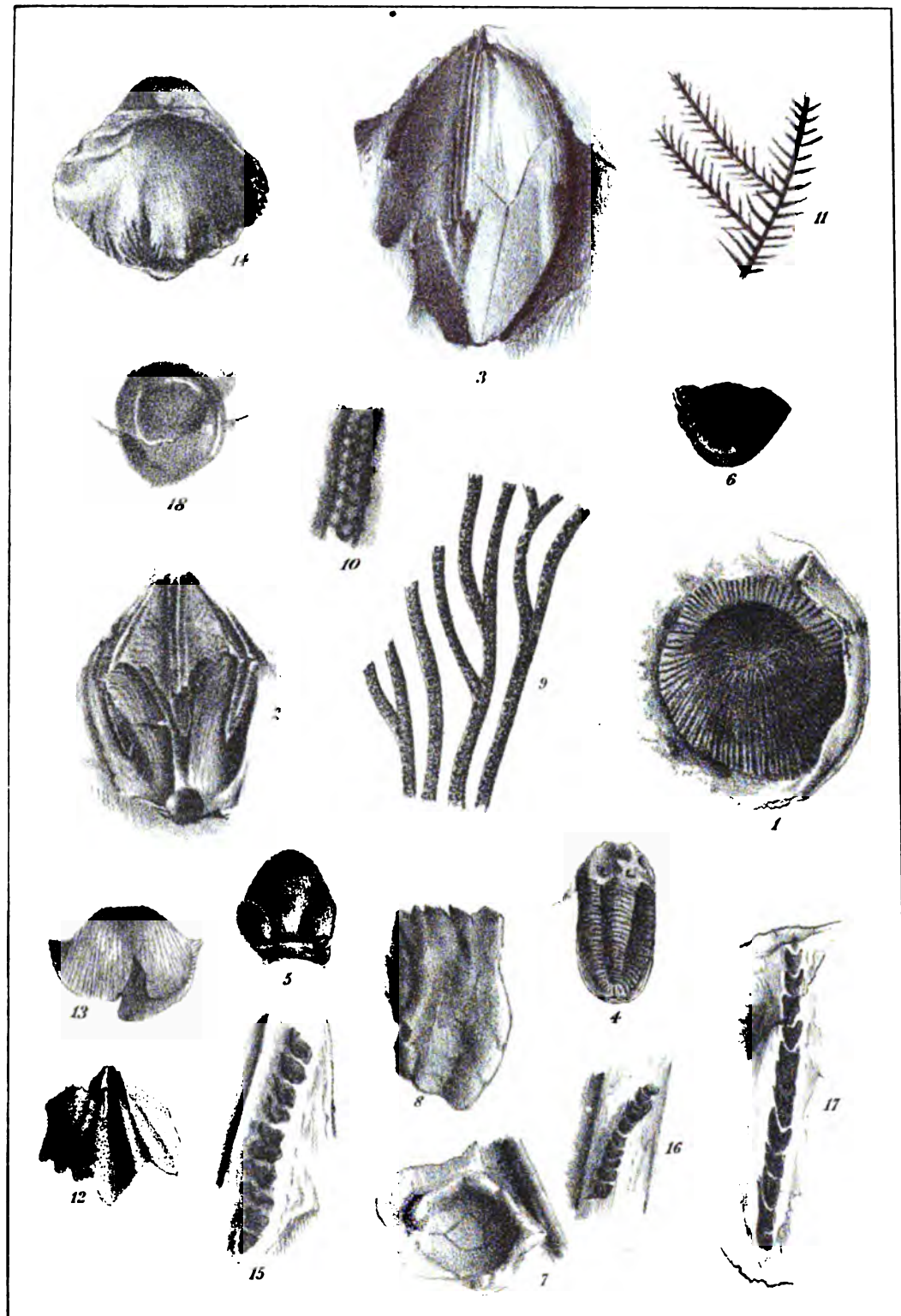
G. H. Barrow, Del. et Lith.

CARBONIFEROUS & CRETACEOUS

MOLLUSCA

PLATE 44.

- Fig. 1. *Zaphrentis profunda*, Eth. fil. Interior of the calice. Rockhampton District. [De V.]
- Fig. 2. *Mesoblastus ? australis*, Eth. fil. Side view of an impression of a calyx. $\times \frac{1}{2}$. Rockhampton District. [De V.]
- Fig. 3. *Tricælocrinus Carpenteri*, Eth. fil. Side view of an internal cast. Rockhampton District. [De V.]
- Fig. 4. *Phillipsia dubia*, Etheridge. Thorax and pygidium decorticated. Rockhampton District. [De V.]
- Fig. 5. *Phillipsia Woodwardi*, Eth. fil. Glabella with large basal lobes. $\times 2$. Rockhampton District. [De V.]
- Fig. 6. Do. Pygidium probably of this species. $\times \frac{1}{2}$. Rockhampton District. [De V.]
- Fig. 7. *Crinoid* (allied to *Stemmatoecrinus*). Basal cup denuded of the test. Rockhampton District. [De V.]
- Fig. 8. *Crinoid Calyx*. Impression of part of an indistinct calyx, with faint traces of plates and the bases of the arms. Rockhampton District. [De V.]
- Fig. 9. *Polypora ? Smithii*, Eth. fil. Fragment of a polyzoarium. Rockhampton District. $\times 2$.
- Fig. 10. Do. Fragment of poriferous face greatly enlarged.
- Fig. 11. *Glaucanome*, sp. ind. Non-poriferous face. $\times 2$. Rockhampton District. [De V.]
- Fig. 12. *Spiriferina duodecimcostata*, McCoy. Internal cast of the ventral valve, showing the slit left by the median ventral septum, and the casts of the punctæ of the shell foramina. Mount Britton Gold Field. [A.M.]
- Fig. 13. *Productus*, sp. ind. Much resembling the young of *P. giganteus*, Martin. Yatton Gold Field.
- Fig. 14. *Productus brachythærus*, G. B. Sowerby. Showing an area, and considerable solidity of shell. Darr River? [A.L.]
- Fig. 15. *Burrow*. Weathered and disjointed infillings of the burrow. (See Pl. viii., fig. 4, and Pl. xxxix., fig. 1.) Rockhampton District. [De V.]
- Fig. 16. Do. A similar specimen. [De V.]
- Fig. 17. Do. Another example seen in natural section. [De V.]
- Fig. 18. Do. Transverse section displaying the involute structure of the burrows. $\times 3$. Rockhampton District. [De V.]



G. H. Barrow Del et Lith

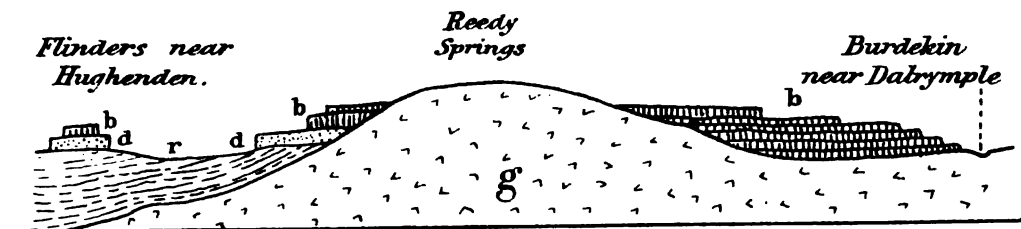


Fig. 1. Diagram—Section from Dalrymple to the Head of the Flinders.

b. Basalt. d. Desert Sandstone. r. Rolling Downs Formation. g. Granite

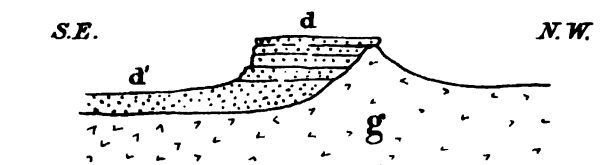


Fig. 2. Diagram—Section across True Blue Hill, Croydon Goldfield.

d. Desert Sandstone. d'. The same unconsolidated, forming sandy flats. g. Granite.

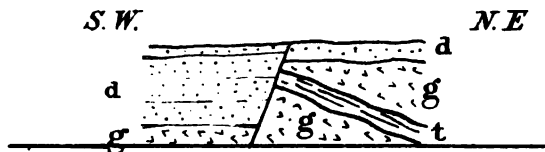


Fig. 3. Section in True Blue 3 & 4 South, Croydon.

d. Desert Sandstone. g. Granite. t. True Blue Reef.

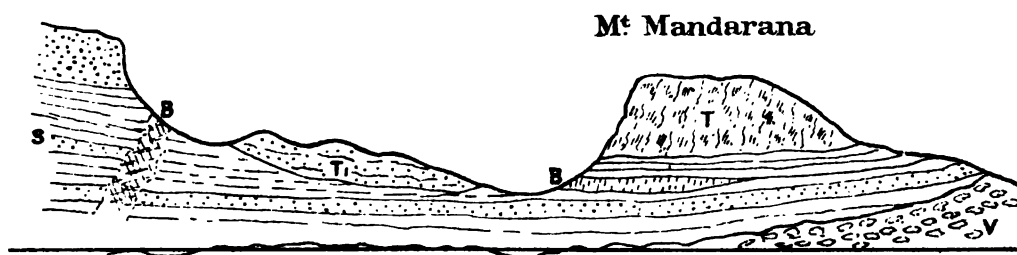


Fig.1. Section across Mt. Mandarana, near Mackay.

S. Carbonifero-Permian Sandstones and Shales. B. Basalt.

V. Volcanic Series. T. Trachyte Lava. Ti. Trachyte-Ash.

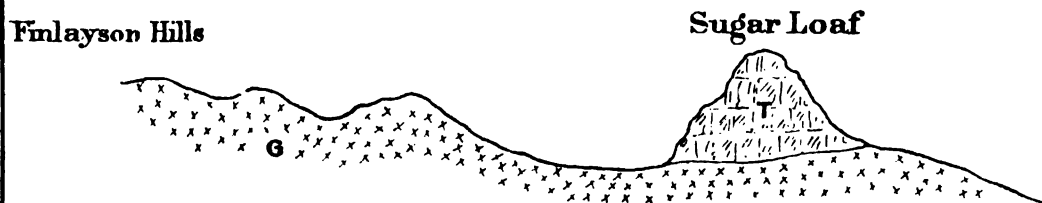


Fig.2. Section across the Finlayson Hills, near Mackay.

G. Granite. T. Trachyte Lava.

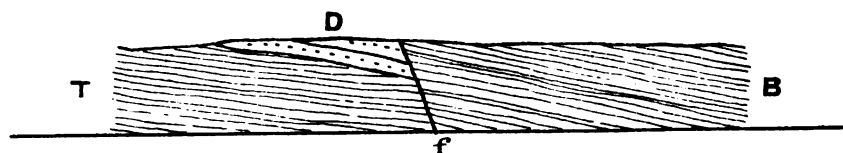
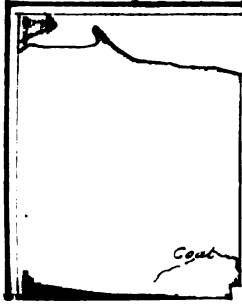


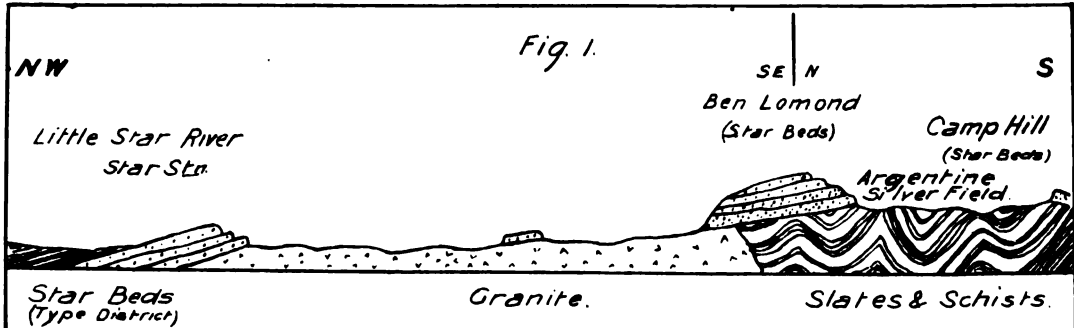
Fig.3. Diagram—Section showing supposed relation of 'Maryborough Beds' to the Burrum Coalfield.

D Maryborough Beds. T. Tinana Coal Series. B. Burrum Coal Series

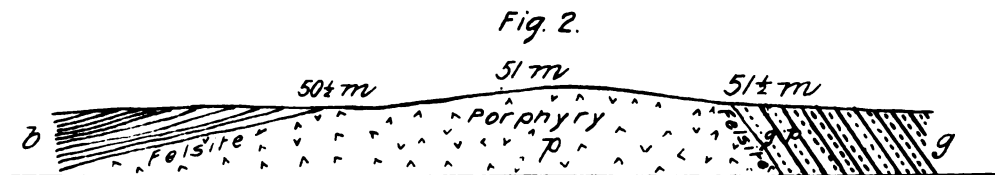
f. Fault.

Geology o





Section from Little Star River to Argentine Silverfield.



Section in Railway Cutting S. of Curra showing relations of Burrum and Gympie Beds

b. Burrum Beds g. Gympie Beds p. Porphyry & Felsite.



Section from Goldsmith's Reefs (Delaney Waters) Southward across the Heads of the Robertson.

T. Bedded Trachyte a. Coarse Ash, passing into Conglomerate
C. Star Beds. S, Schists & Gneiss F. Fault. r. Lady Franklin.

*Diamond Drill Core*

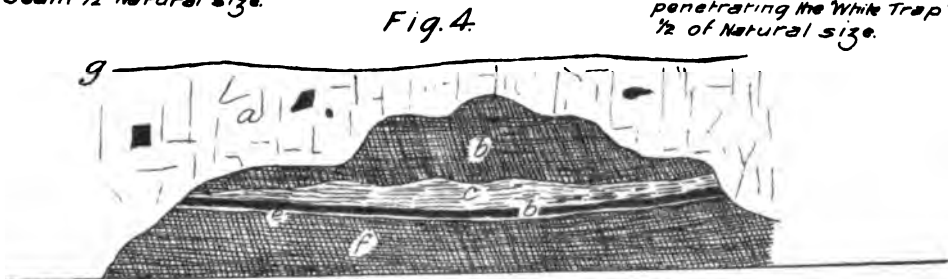
*Mt Pelican C^o Bore, Bowen River
at 191^{ft}. Showing 'White Trap'
intruding into base of a
Coal Seam ½ Natural size.*

*Diamond Drill Core*

*Same Bore at 307^{ft}. 9 inches.
Showing masses of 'White Trap'
in burnt Coal Seam.*

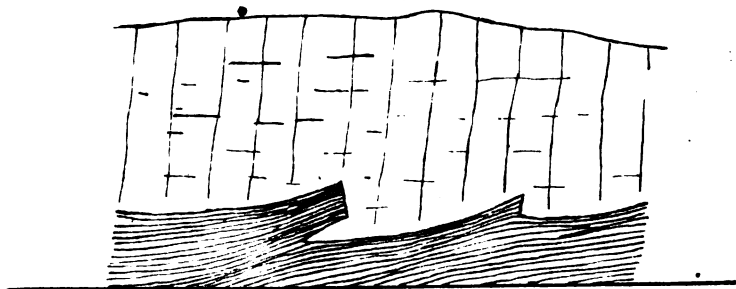
*Diamond Drill Bore*

*Same Bore at 288½ ft. Showing
'White Trap' intruding into Coal
Seam, with threads of Coal
penetrating the 'White Trap'
½ of Natural size.*

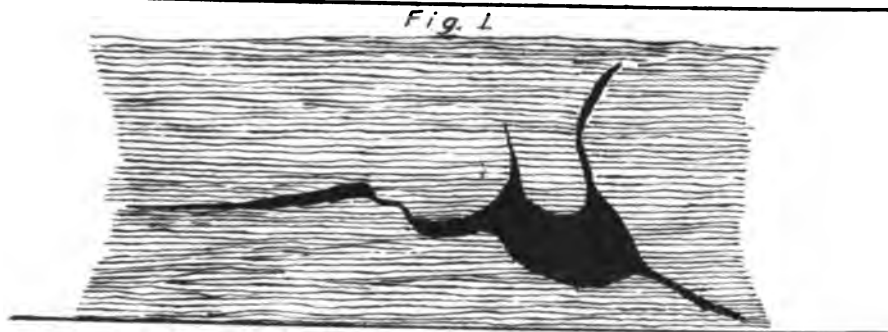


*Coal Seam destroyed by intrusive Sheet of Dolerite,
N^o 2 Travers Station, Rosella Creek.*

g. Burnt Coal, 3 inches. a. Dolerite-'White Trap' in part, involving angular blocks of Coal. b. Burnt Coal, upper part columnar, 3 ft 6 inches. c. Blue Shale, topmost part hardened, 2 ft 1 inch. d. Burnt Coal. e. Black Clay, 3 inches. f. Burnt Coal, 3 feet.

Fig. 5.

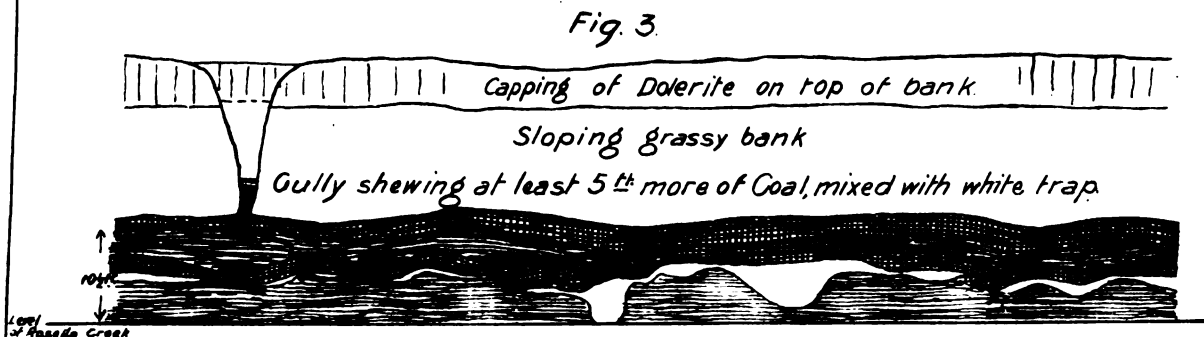
*Vertical Section, showing Junction of Shales
and intrusive Dolerite Sheet, Rosella C^o.*



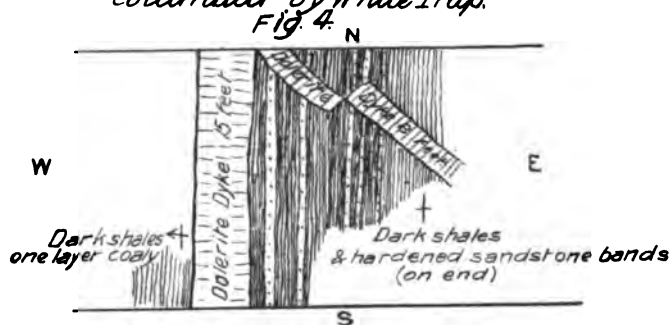
*Vertical Section of Shales, with "Pocket" of Mineral Pitch,
Rosella Creek*



*a. Shales and Sandstone, b Dolerite.
Section near Mouth of Jack's Creek*

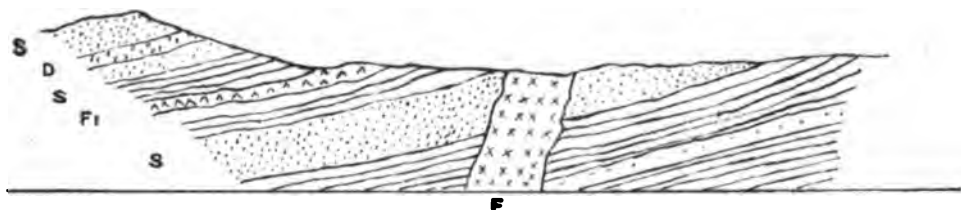


*Havilah Coal Seam, Rosella Creek, burned and partly rendered
columnar by White Trap.*



*Plan of Bed of Jacks Creek, Bower River, showing Dolerite Dykes
intersecting Shales and Sandstone.*

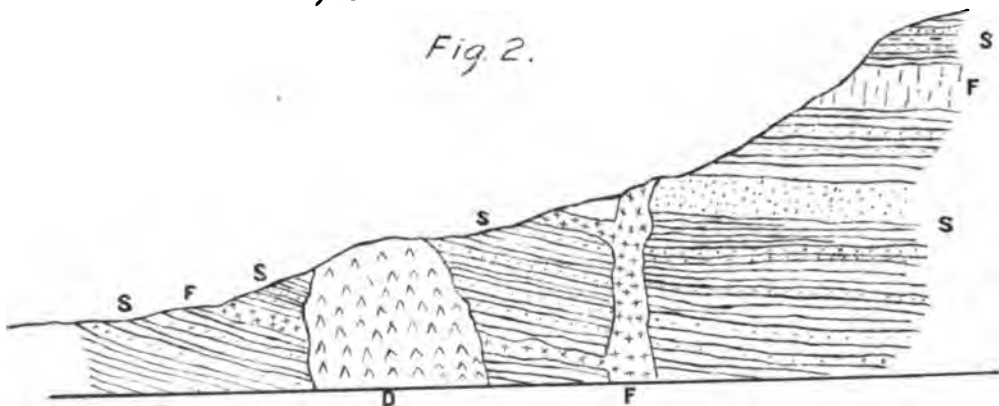
Fig. 1.



Section on Alligator Creek near Mackay

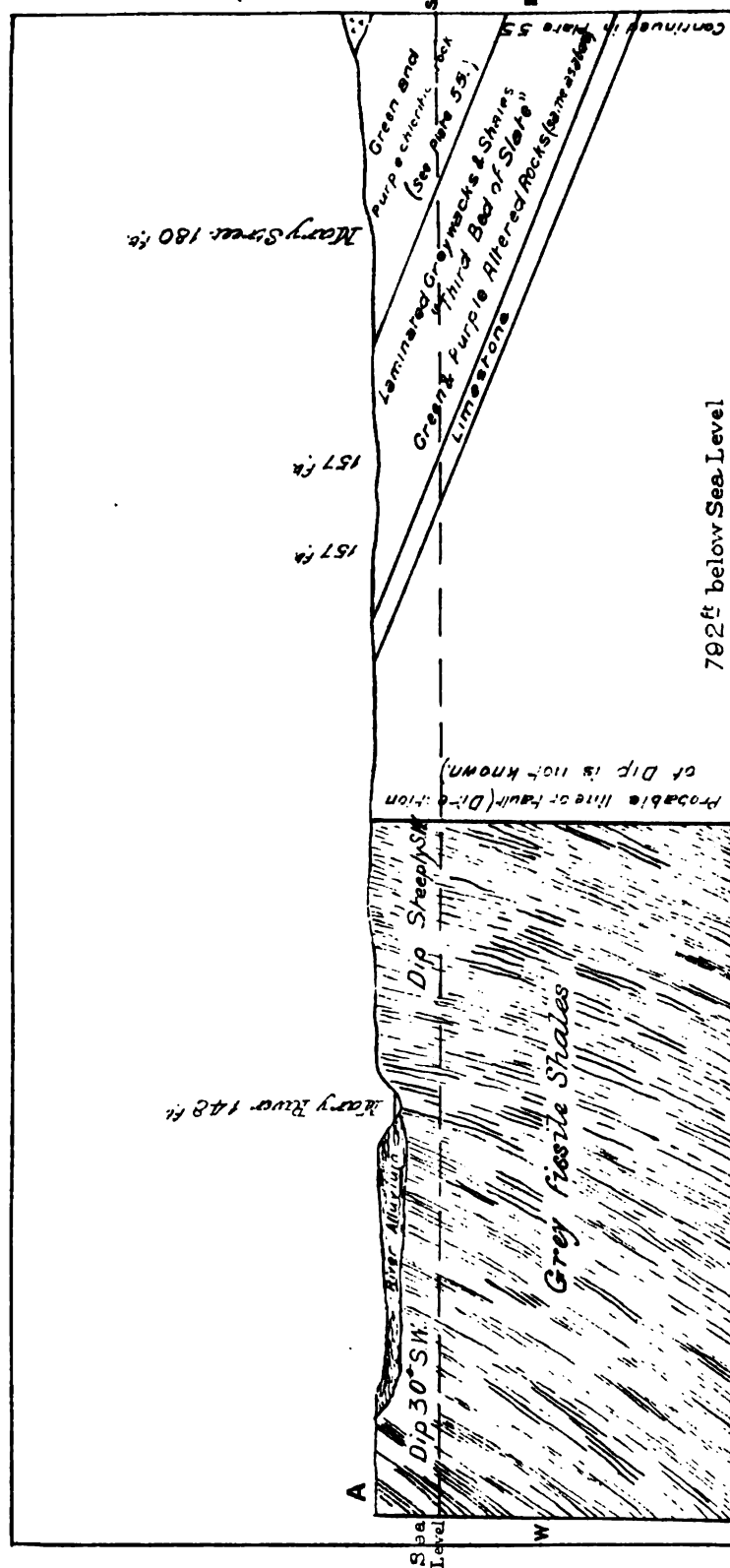
- S** Sandstone and Shales (Lower Series, Bowen River Beds)
- D** Diorite Bed (contemporaneous)
- Fi** Felstone Sheet (intrusive)
- F** Felsite Dyke

Fig. 2.



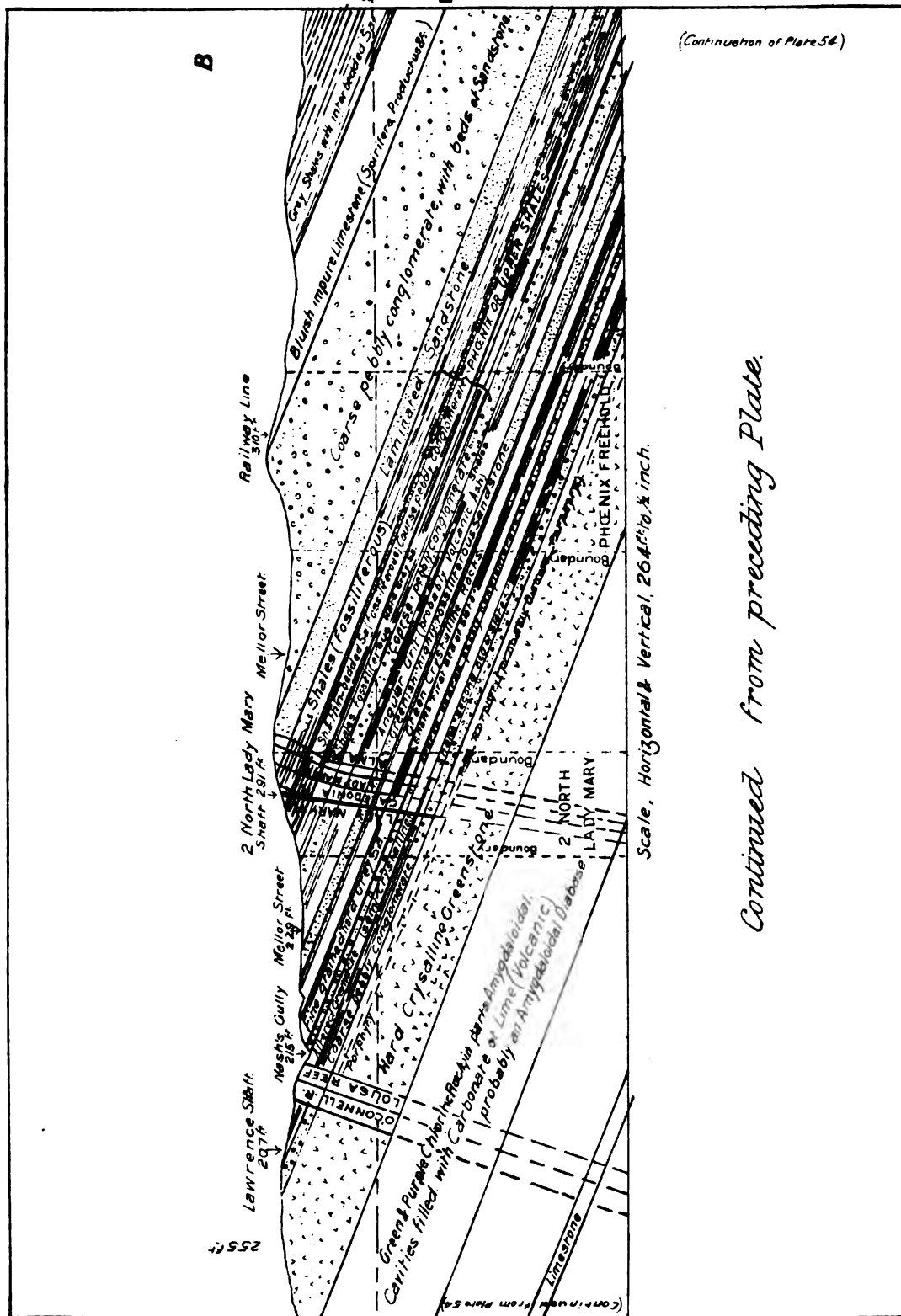
Section in Bells Creek near Mackay

- S** Grits and Shales (Lower Series, Bowen River Coalfield)
- F** Intrusive Felsite in dyks and sheets
- D** Intrusive Diorite



Scale Horizontal & Vertical 264 ft to 1 inch.

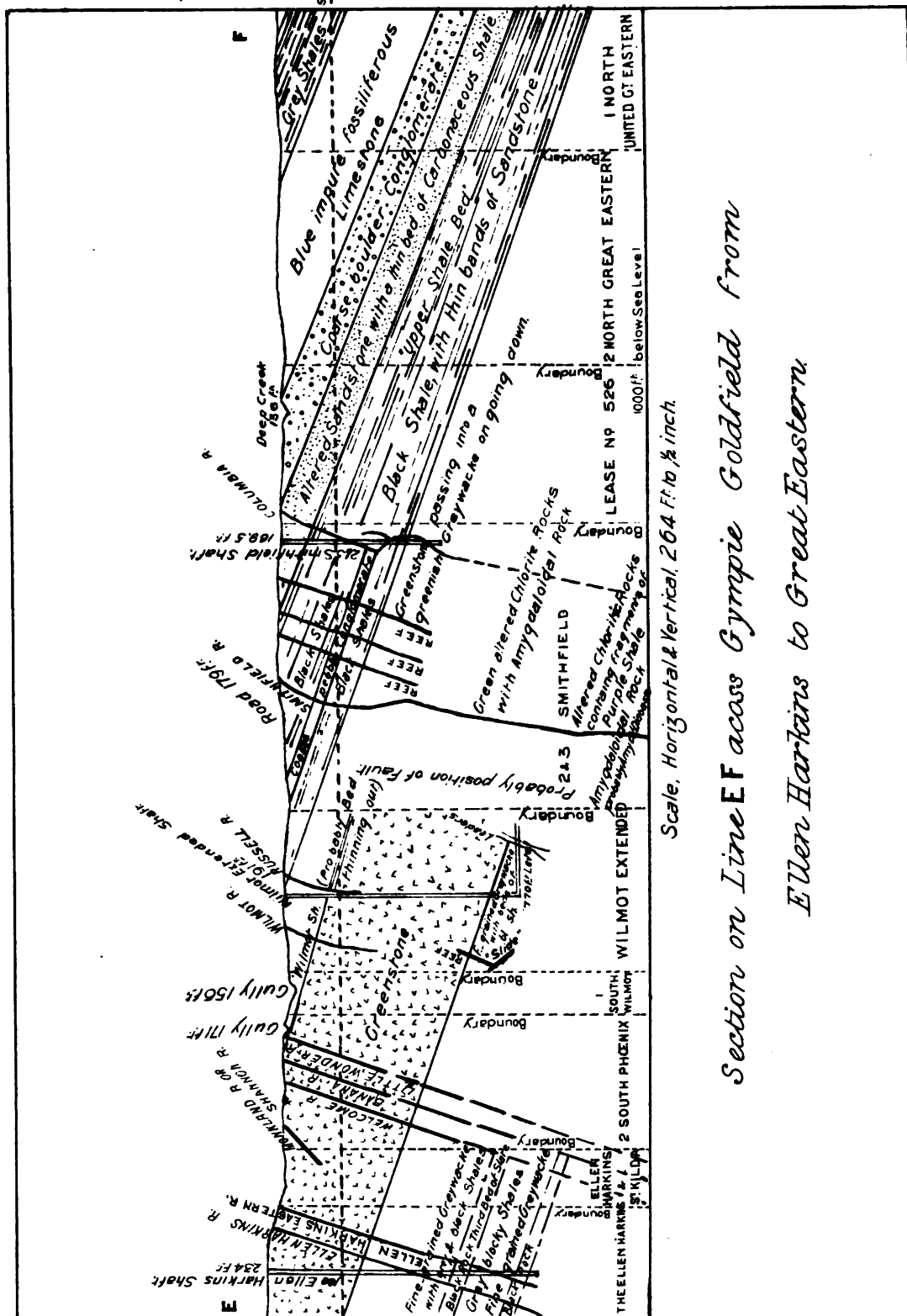
Section on Line A B across Gympie Goldfield from Mary River near Channon Street Bridge to the old Cemetery.



Continued from preceding Plate.

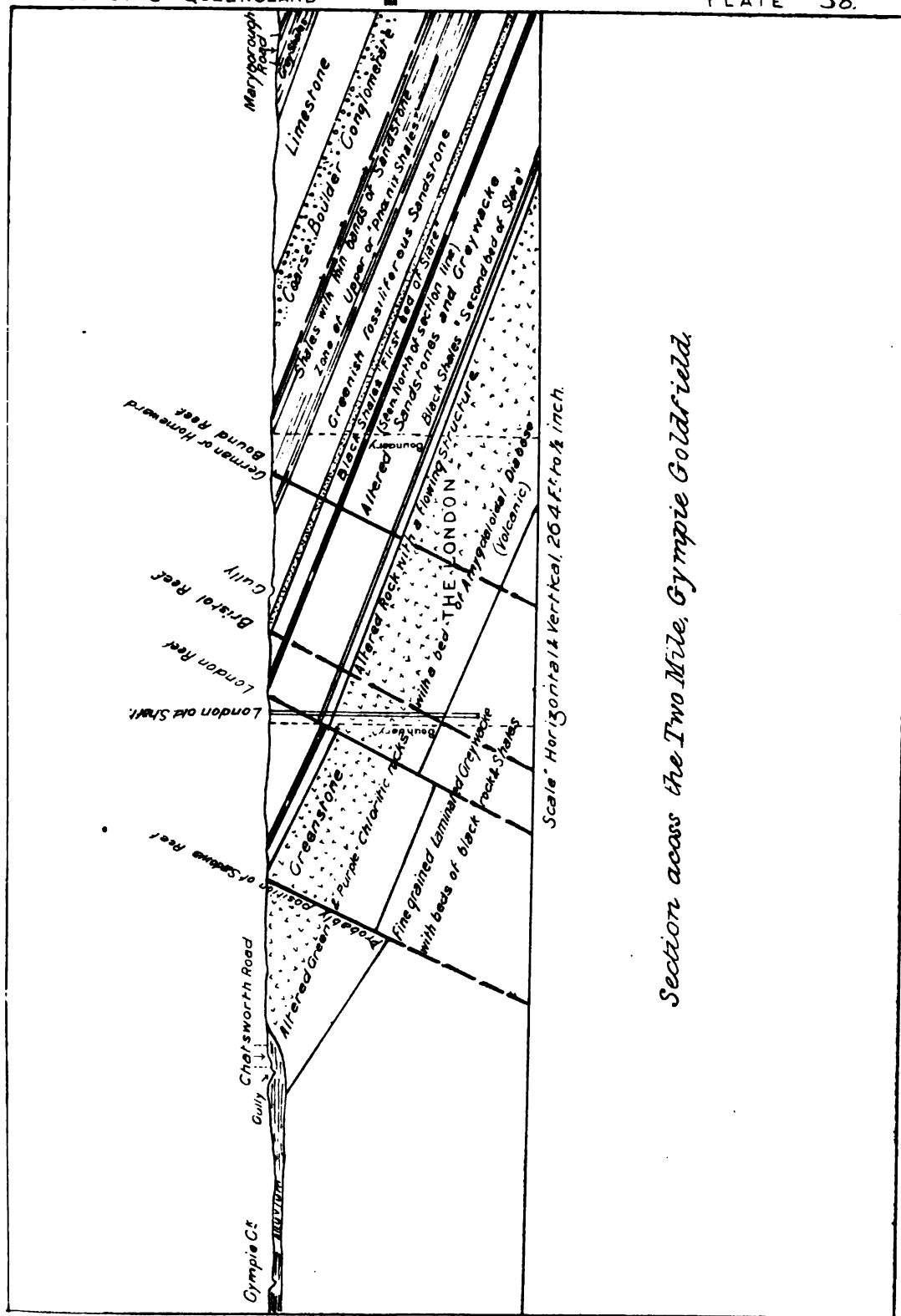


*Section from Line C.D. across Gympie Goldfield from
Excelsior Reef near Mary River to Coothambra Road.*



Scale, Horizontal & Vertical, 264 Ft. to $\frac{1}{2}$ inch.

Section on Line EF across Gympie Goldfield from
Ellen Hartins to Great Eastern.



Section across the Two Mile, Gympie Goldfield.

INTENSIVE STUDY
Peak, N. S. W.
x50 (With polarizer only)



A. A. Wright lith.

DRAWN & PRINTED AT THE SURVEYOR GENERAL'S OFFICE, BRISBANE

J. Florio Clarke del.

INTRUSIVE DYKE.

Peak, N. S. W.

x50 (With polarizer only)

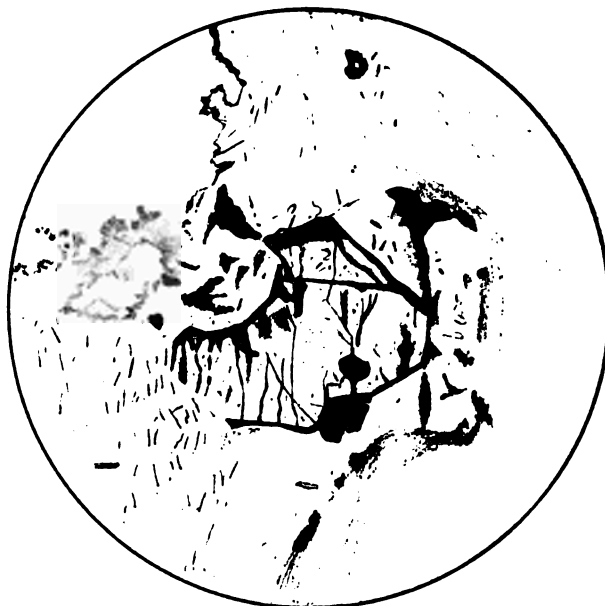


Fig. 1.
RHYOLITE
Nell Id New Guinea.
142 (Polarizer only.)



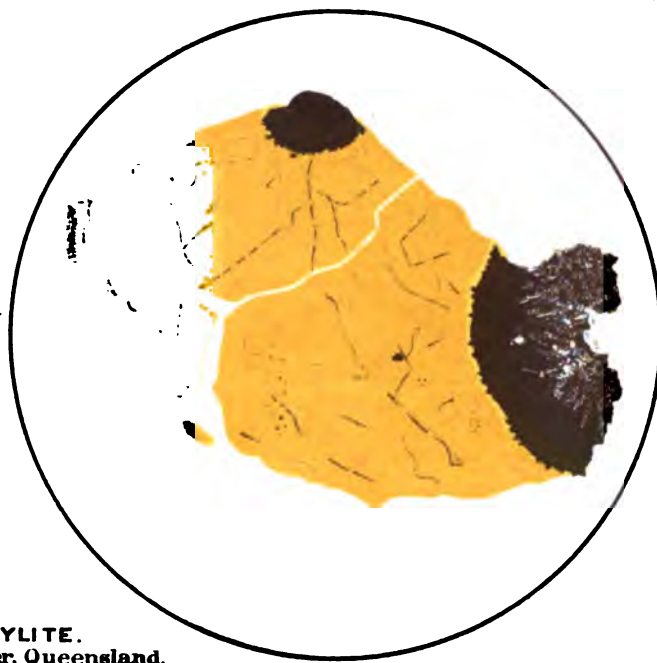
Fig. 2.
RHYOLITE
Nell Id New Guinea.
142 (Parallel nicols)



Fig. 1.
RHYOLITE.
Nell 1d New Guinea. X42 (*Crossed nicols*)

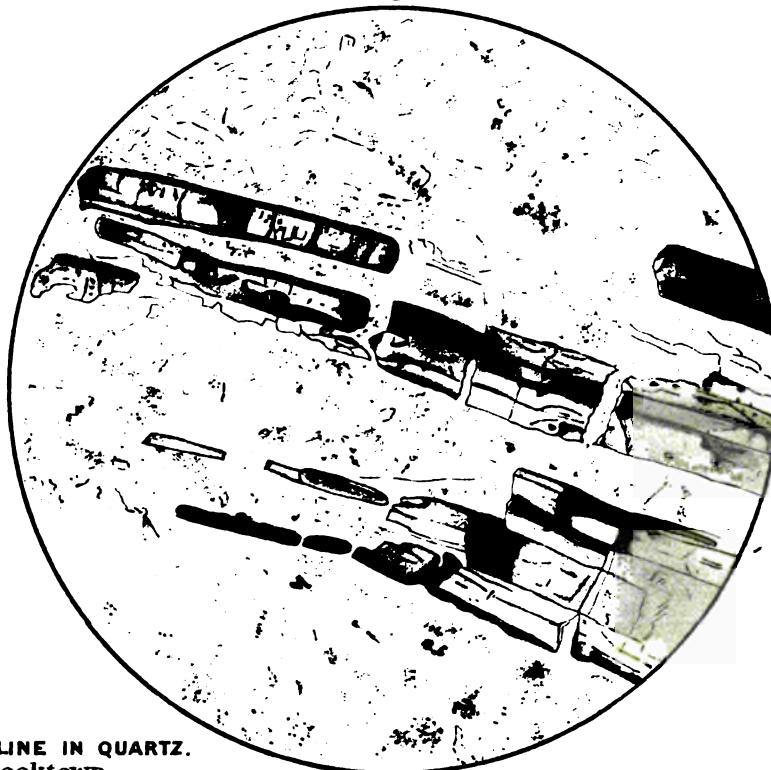


Fig. 2.
RHYOLITE.
Mackay.
X275 (*Crossed nicols.*)



TACHYLITE.
Mitchell River, Queensland.
X275 (Polarizer only.)

Fig. 1.



TOURMALINE IN QUARTZ.
Cooktown.
142 (Polarizer only.)

Fig. 2.



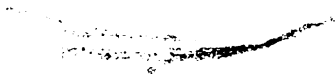
Fig. 1.

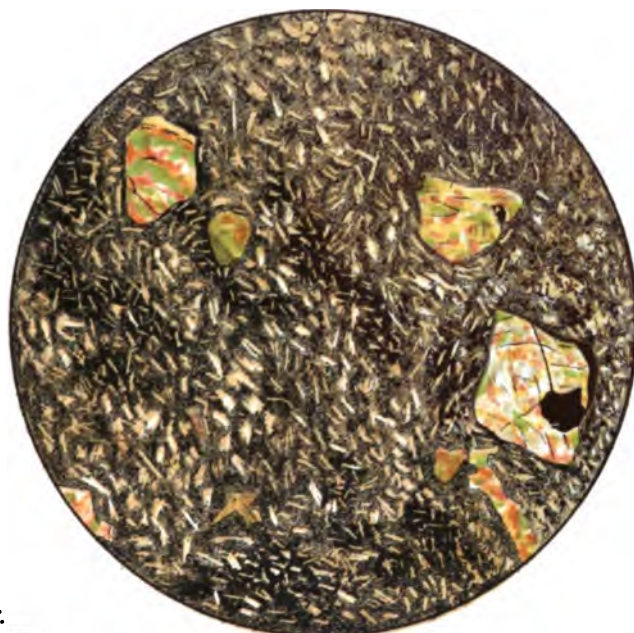
Cape Upstart.
275 (*Crossed nicols.*)



Fig. 2.

PITCHSTONE
Sheffield Tasmania.
142 (*Polarizer only*)





BASALT.
Russell River.
150 (Crossed nicols.)

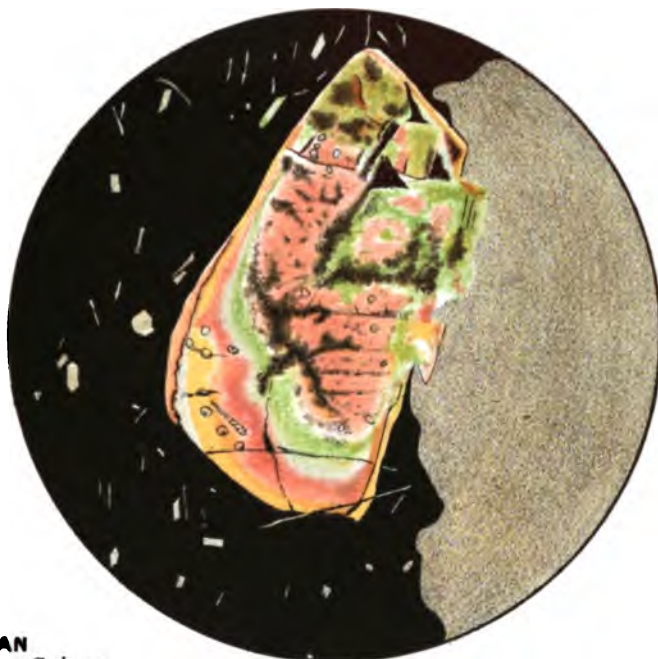
Fig. 1.



AUGITE CRYSTAL, SHOWING TWINNING.
Gympie.
150 (Crossed nicols.)

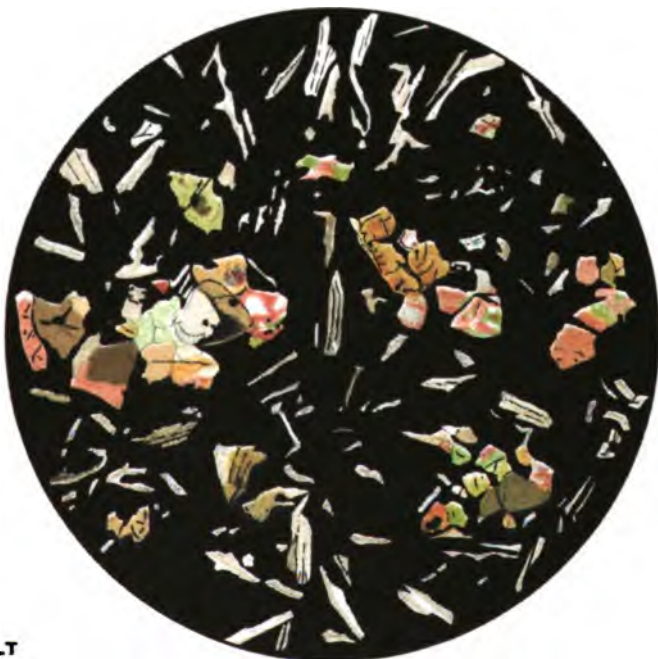
Fig. 2.





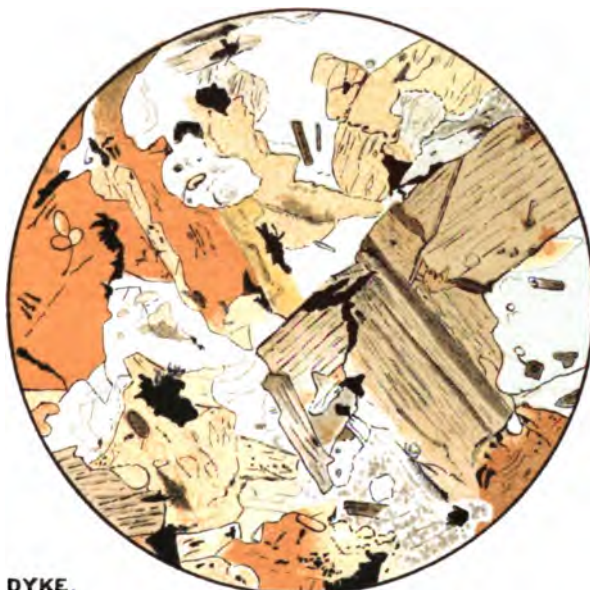
OBSIDIAN
Fergusson Id. New Guinea.
130 (*Crossed nicols.*)

Fig. 1.



BASALT
Burdakin River.
127.5 (*Crossed nicols.*)

Fig. 2.



HORNBLENDIC DYKE.
 Durham Mine, Etheridge.
127.5 (Polarizer only.)

Fig. 1.



HORNBLENDIC GRANITE
 WITH VEINS OF ZEOLITE & CALCSPAR.
 Charters Towers.
Natural size. Polished face.

Fig. 2.



Dauntton's Hill, Upper Cape.
x42 (Crossed nicols.)

